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Preliminary list of spiders and other arachnids of Saudi Arabia (Except ticks and mites)

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Abstract

Seven orders of class Arachnida were recorded from Saudi Arabia; in addition to Acari (ticks and mites are outside the scope of this work). They are: Araneae (25 Families, 69 genera, 77 species), Scorpiones (3 Families, 14 genera, 23 species), Pseudoscorpiones (5 Families, 11 genera, 19 species), Solifugae (4 Families, 8 genera, 15 species), Opiliones (1 Family, 1 genus, 1 species), Palpigradi (1 Family, 1 genus, 1 species), and Amblypygi (1 Family, 1 genus, 1 species). The total is: 40 Families, 105 genera, 137 species. Each order section includes recorded taxa with their localities, list of species, and keys to families of spiders, scorpions, pseudoscorpions, and sun-spiders.

Four spider families (Araneidae, Corinnidae, Oonopidae, Palpimanidae), 7 genera [*Arctosa* ? (Lycosidae), *Micaria* (Gnaphosidae), *Oecobius* (Oecobiidae), *Oxyopes* (Oxyopidae), *Runcinia* (Thomisidae), *Thanatus* & *Tibellus* (Philodromidae)], and 2 species [*Tibellus vossioni* Simon, 1884 (Philodromidae) and *Runcinia grammica* (C.L Koch, 1837) (Thomisidae)] are recorded from Saudi Arabia for the first time.

Notes on four species, *Runcinia grammica* (Thomisidae), *Tibellus vossioni* (Philodromidae), *Pterotricha dalmasi* (Gnaphosidae), and *Eusparassus laevatus* (Sparassidae), are included with pictures of habitus, palpal organ and epigynum of these species.

Keywords: Arachnida, Araneae, Scorpiones, Pseudoscorpiones, Solifugae, Opiliones, Palpigradi, Amblypygi, Saudi Arabia.

Introduction

Saudi Arabia (2,149,690 km^2) is the largest Arab state in Asia. It is called the "Land of the Two Holy Mosques" in Mecca and Medina, the two holiest places in Islam. Saudi Arabia is divided into 13 provinces (Fig. 1). Most of the country is desert.

Although, it has the world's second largest oil reserve, its natural resources, especially invertebrate animals, are poorly studied. The studies on spiders and other

arachnids are few. The available publications dealt with collected arachnid specimens were consulted to prepare this preliminary list of Saudi Arabian spiders and other arachnids. Also, arachnid specimens collected from different regions of Saudi Arabia by colleagues were primarily identified, sometimes only to genus or family levels because of lack of information or because the specimens are not adult. More specimens and better identification are required to get better information on the arachnids of the country. Seven orders of class Arachnida are recorded from Saudi Arabia; in addition to Acari (ticks and mites are outside the scope of this work). Orders Schizomida, Uropygi, and Ricinulei are not recorded yet from Saudi Arabia.

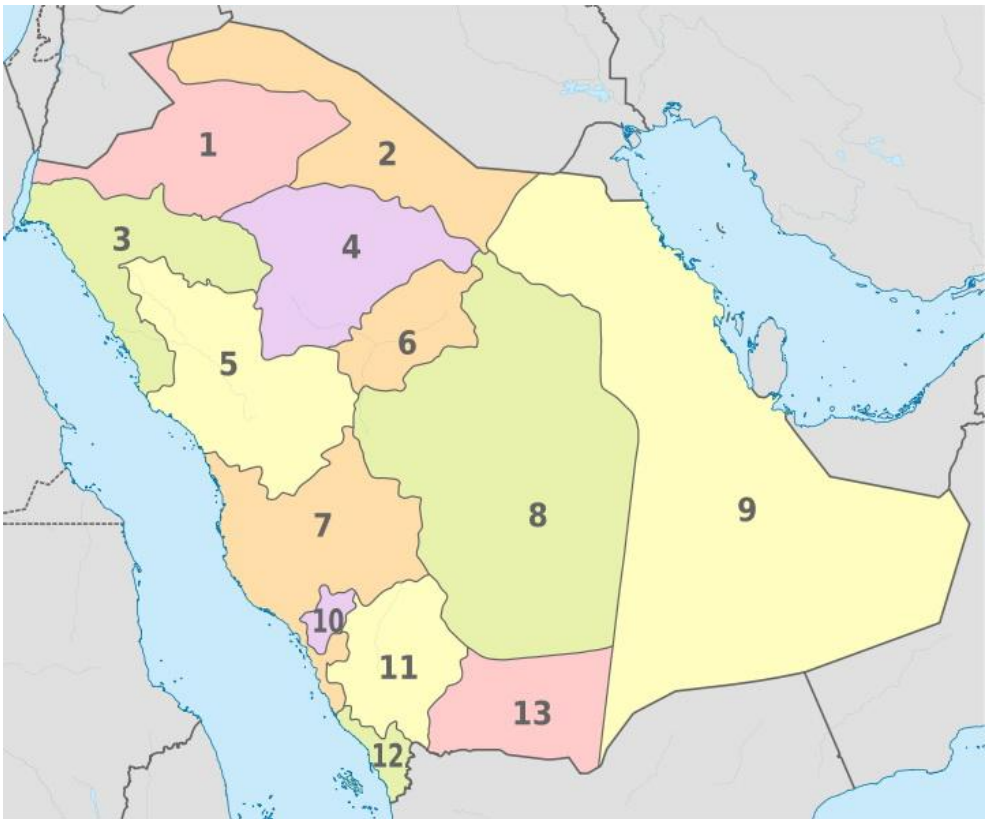

Fig. 1. Map of Saudi Arabia and its provinces.
1. Al Jawf. 2. Northern borders. 3. Tabuk. 4. Ha'il. 5. Al Madinah. 6. Al Qasim. 7. Makkah. 8. Al Riyadh. 9. Eastern province. 10. Al Baha. 11. Asir. 12. Jizan. 13. Najran.
After Wikipedia (http://en.wikipedia.org/wiki/File:Saudi_Arabia,_administrative_divisions_-_Nmbrs_-_colored.svg)

The seven recorded arachnid orders are: Araneae, Scorpiones, Pseudoscorpiones, Solifugae, Opiliones, Palpigradi, and Amblypygi. The numbers of recorded taxa are as follows:

Order	Families	Genera	Species
Araneae	25	69	77
Scorpiones	3	14	23
Pseudoscorpiones	5	11	19
Solifugae	4	8	15
Opiliones	1	1	1
Palpigradi	1	1	1
Amblypygi	1	1	1
Total	40	105	137

Each order is dealt with in a separate section that includes recorded taxa with their localities, list of species, keys to families of spiders, scorpions, pseudoscorpions, and sun-spiders. All the references are collected together. The authorship and date of publication of both Savigny and Audouin (1825) are according to El-Hennawy (2000).

The abbreviations used for collections mentioned in the text are:

AMNH = American Museum of Natural History, New York, USA
CTh = Coll. Konrad Thaler & Barbara Knoflach, Innsbruck, Austria
DBUJ = Department of Biosciences, University, Jeddah, Saudi Arabia
KSMA = King Saud University Museum of Arthropods, Al Riyadh, Saudi Arabia
MHNG = Muséum d'Histoire Naturelle, Genève, Switzerland
MNHNP, MNHN = Muséum National d'Histoire Naturelle, Paris, France
MRAC = Musée Royal de l'Afrique Centrale, Tervuren, Belgium
NHMB, NMB = Naturhistorisches Museum, Basel, Switzerland
PCMA = Private Collection Mark Alderweireldt
SMF = Senckenberg Research Institute, Frankfurt am Main, Germany

I. Spiders of Saudi Arabia

Among the sporadic publications on spiders of Saudi Arabia, a few families were "better" studied and a few publications are remarkable. These studies are reviewed below:

Jocqué (1981) described the new subspecies *Erigone vagans arabica* of Family Linyphiidae from Saudi Arabia. Later, he described three new zodariid species with Ono (Ono & Jocqué, 1986): *Trygetus riyadhensis* and *Acanthinozodium buettikeri* from Riyadh's region, and alone (Jocqué, 1991): *Lachesana insensibilis* near Jeddah. Two of the three species are endemic.

Dippenaar-Schoeman (1989) recorded 8 species of crab spiders (Thomisidae) from Saudi Arabia, including a new endemic species called *Misumena buettikeri*, which is later transferred to genus *Ansiea*. Dippenaar-Schoeman & van Harten (2007) recorded the thomisid *Thomisus arabicus* Simon, 1882 and *Thomisus daradioides* Simon, 1890 from Saudi Arabia.

Prószyński (1989) described 19 species of Salticidae from Saudi Arabia, containing one new genus *Heliophanillus* and 10 new species, and stated that "the fauna exhibits a clear relationship with that of the Ethiopian region, with less influence from the Oriental one, and even less from the Mediterranean". Later, in his second part on "Salticidae of Saudi Arabia", Prószyński (1993) listed 12 species from Saudi Arabia, containing 6 new species.

Alderweireldt (1991) recorded *Evippa praelongipes* (O.P.-Cambridge, 1870) from Saudi Arabia and later (Alderweireldt, 1996) he described the new species *Ocyale neatalanta* which is now synonymised with *Ocyale pilosa* (Roewer, 1960). Alderweireldt & Jocqué (2005) described the new species *Hippasa sinai* from Sinai (Egypt) and Saudi Arabia.

Ovtsharenko *et al.* (1994) described the new endemic gnaphosid species *Synaphosus khashm* from Khashm Khafs, Ar Riyad, Saudi Arabia and recorded the presence of *Synaphosus syntheticus* in the country.

Jäger (2000) described the new endemic sparassid species *Cebrennus intermedius* from Saudi Arabia, and recorded *Cebrennus aethiopicus* Simon, 1880 from the country.

Knoflach & van Harten (2002) recorded 3 species of genus *Latrodectus* (Theridiidae) from Saudi Arabia; *Latrodectus dahli* Levi, 1959, *L. geometricus* C.L. Koch, 1841, and *L. renivulvatus* Dahl, 1902. In two "Notes on Mediterranean Theridiidae", the authors recorded both *Paidiscura dromedaria* (Simon, 1880) and

Theridion spinitarse O.P.-Cambridge, 1876 from Saudi Arabia (Knoflach & Thaler, 2000; Knoflach *et al.*, 2009).

El-Hennawy (2011) recorded the afrotropical *Cheiracanthium molle* L. Koch, 1875 from Al-Baha in Saudi Arabia for the first time.

Desouky & El-Hennawy (2012) presented a preliminary list of Ha'il's spiders, including 14 genera, in addition to five unidentified spider species, belonging to 16 families.

Moradmand (2013) described the new species *Eusparassus arabicus* from "*Mintaqat ar Riyad*" and other places of Saudi Arabia, and recorded *Eusparassus laevatus* (Simon, 1897) comb. nov. from *Al Bahah* and other regions of Saudi Arabia.

Abd El-Wakeil *et al.* (2014) studied the soil macroinvertebrates of Wadi Al-Arj in the Taif region of western Saudi Arabia and listed in Table (2) 10 families, 16 genera, and 8 species of spiders, in addition to the sun-spider *Biton* sp. of Family Daesiidae and the pseudoscorpion Family Olpiidae.

The specimens collected by El-Hawagry from Al-Baha region are partly studied. The final identification would add more records to the Saudi Arabian fauna.

This paper is the fourth one in the author's study of Saudi Arabian spiders. The first one recorded *Cheiracanthium molle*, its genus and its family from Saudi Arabia for the first time (El-Hennawy, 2011).

The second one (Desouky & El-Hennawy, 2012) recorded for the first time from Saudi Arabia 7 families, 8 genera, and 7 species of Order Araneae as follows:
Family **Agelenidae**, Genus ***Benoitia***, ***Benoitia lepida***
Family **Eresidae**, Genus ***Stegodyphus***, ***Stegodyphus lineatus***
Family **Oecobiidae**, Genus ***Uroctea*** sp.
Family **Pholcidae**, Genus ***Artema***, ***Artema atlanta***
Family **Scytodidae**, ***Scytodes*** sp.
Family **Selenopidae**, Genus ***Selenops*** sp.
Family **Sicariidae**, Genus ***Loxosceles***, ***Loxosceles rufescens***
Pterotricha dalmasi [Family **Gnaphosidae**]
Genus ***Cerbalus*** [Family **Sparassidae**]
Eusparassus walckenaeri [Family **Sparassidae**]
Latrodectus tredecimguttatus [Family **Theridiidae**]

The third one (Abd El-Wakeil *et al.*, 2014; identification of El-Hennawy) added 1 family, 9 genera, and 6 species to the spider fauna of Saudi Arabia as follows:
Family **Uloboridae**, Genus ***Uloborus*** sp.
Scytodes univittata [Family **Scytodidae**]
Genus ***Poecilochroa***, ***Poecilochroa senilis*** [Family **Gnaphosidae**]
Genus ***Trachyzelotes***, ***Trachyzelotes jaxartensis*** [Family **Gnaphosidae**]
Genus ***Mermessus*** [Family **Linyphiidae**]
Genus ***Hogna***, ***Hogna ferox*** [Family **Lycosidae**]
Genus ***Pardosa*** [Family **Lycosidae**]
Genus ***Wadicosa***, ***Wadicosa fidelis*** [Family **Lycosidae**]
Genus ***Philodromus*** [Family **Philodromidae**]
Genus ***Steatoda***, ***Steatoda paykulliana*** [Family **Theridiidae**]

Now, this work records the following taxa from Saudi Arabia for the first time:
Families **Araneidae**, **Corinnidae**, **Palpimanidae** from Al-Baha and Family **Oonopidae** from Fawasan.

Genera ***Arctosa*** ? (Lycosidae), ***Micaria*** (Gnaphosidae), ***Oxyopes*** (Oxyopidae), ***Runcinia*** (Thomisidae), ***Thanatus*** & ***Tibellus*** (Philodromidae) from Al-Baha and genus ***Oecobius*** (Oecobiidae) from Abha.

Tibellus vossioni Simon, 1884 (Philodromidae) and ***Runcinia grammica*** (C.L Koch, 1837) (Thomisidae) from Al-Baha.

[The total is: 13 Families, 25 genera, and 16 species of Order Araneae.]

Order Araneae Clerck, 1757

Family **Agelenidae** C.L. Koch, 1837

Genus ***Benoitia*** Lehtinen, 1967

♂♀ ***Benoitia lepida*** (O.P.-Cambridge, 1876)

Benoitia lepida (O.P.-Cambridge, 1876) - Desouky & El-Hennawy (2012): 7♀, 1s♂, 3j, Ha'il City, 22 July 2010, N 27°32'35" E 41°42'15"; Rujama Village, 13 August 2011, N 27°55'09" E 42°08'25"; Sofaitt, 14 August 2011, N 25°37'50" E 40°38'10".

Benoitia lepida - Abd El-Wakeil *et al.* (2014): Wadi Al-Arj, Taif, Saudi Arabia.

Agelena sp.? - Al-Baha, leg. El-Hawagry: 1s♀, 25.5.2011, Gebel El-Baher.

Family **Araneidae** Clerck, 1757

Al-Baha, leg. El-Hawagry: 1j, 1.6.2011, Gebel El-Baher; 1j *Larinia* ? sp., 18.4.2012, 1j, 22.2.2012, Al-Mekhwa.

Family **Corinnidae** Karsch, 1880

Al-Baha, leg. El-Hawagry: 1j, 2.1.2012, Dhee Ain.

Family **Eresidae** C.L. Koch, 1845

Genus ***Stegodyphus*** Simon, 1873

♂♀ ***Stegodyphus lineatus*** (Latreille, 1817)

Stegodyphus lineatus (Latreille, 1817) - Desouky & El-Hennawy (2012): 5♀, Great Nofood, 21 August 2010, N 27°49'05" E 40°54'00"; Om Sanman, 21 August 2010, N 28°05'18" E 40°54'00"; Rujama Village, 13 August 2011, N 27°56 59" E 42°08'25".

Family **Gnaphosidae** Pocock, 1898

Genus ***Micaria*** Westring, 1851

Micaria sp. - Al-Baha, leg. El-Hawagry: 1j, 2.1.2012, Dhee Ain.

Genus ***Poecilochroa*** Westring, 1874

♂♀ ***Poecilochroa senilis*** (O.P.-Cambridge, 1872)

Poecilochroa senilis - Abd El-Wakeil *et al.* (2014): Wadi Al-Arj, Taif, Saudi Arabia.

Genus ***Pterotricha*** Kulczyński, 1903

♂♀ ***Pterotricha dalmasi*** Fage, 1929 (Figs. 1-6)

Pterotricha dalmasi Fage, 1929 - Desouky & El-Hennawy (2012): 1♂, 2♀, 1s♂, Rujama, 13 August 2011, N 27°56'10" E 42°07'45".

Pterotricha dalmasi - Al-Baha, leg. El-Hawagry: 2♀, 1.2.2012, 6♀, 1j, 11.4.2012, 1 s♂, 8.6.2011, 1j, 21.12.2011, Ghabet Shohba; 1♂, 4.4.2012, 2♀, 1j, 17.5.2012, Rhaghdan.

♂♀ ***Pterotricha lesserti*** Dalmas, 1921

Pterotricha lesserti Dalmas, 1921 - Levy, 1995: 960-962, f. 63, 98-102 (♂, S♀), *Pterotricha fanatica* Dalmas, 1921: 261, fig. 27; ♀ Syntype from Arabia, Jiddah (MNHN, B.663. Ar.3201).

Genus ***Setaphis*** Simon, 1893
♂♀ ***Setaphis subtilis*** (Simon, 1897)
Setaphis subtilis (Simon, 1897) - Platnick & Murphy, 1996: 9-12, f. 21-24, Material Examined: Saudi Arabia: Riyadh, Jan. 11, 1980 (A.S. Talhouk, NMB), 1♀.

Setaphis sp. - Abd El-Wakeil *et al.* (2014): Wadi Al-Arj, Taif, Saudi Arabia.

Genus ***Synaphosus*** Platnick & Shadab, 1980
♀ ***Synaphosus khashm*** Ovtsharenko, Levy & Platnick, 1994 **Only in Saudi Arabia**
Synaphosus khashm n.sp. - Ovtsharenko, Levy & Platnick, 1994: 24, f. 84-85 (D♀), Type: Female holotype from Khashm Khafs, Ar Riyad, Saudi Arabia (March 13, 1981: W. Büttiker), deposited in NMB.

♂♀ ***Synaphosus syntheticus*** (Chamberlin, 1924)
Synaphosus syntheticus - Ovtsharenko, Levy & Platnick, 1994: 5-6, f. 1-2, 12-20 (♂♀), Saudi Arabia: Dirab Pigeon, Dec. 2, 1979 (W. Büttiker, NMB), 1♂, 1♀.

Genus ***Trachyzelotes*** Lohmander, 1944
♂♀ ***Trachyzelotes jaxartensis*** (Kroneberg, 1875)
Trachyzelotes jaxartensis - Abd El-Wakeil *et al.* (2014): Wadi Al-Arj, Taif, Saudi Arabia.

Genus ***Zelotes*** Gistel, 1848
♂♀ ***Zelotes laetus*** (O.P.-Cambridge, 1872)
Zelotes laetus (O.P.-Cambridge, 1872) - FitzPatrick, 2007: 108, f. 21-24 (♂♀, S), *Material examined*: Saudi Arabia: Juriad Island [27°11'N, 49°57'E], 10 September 1981, J. M. Bafort, 1♀, MRAC 168.723.

Zelotes sp. - Abd El-Wakeil *et al.* (2014): Wadi Al-Arj, Taif, Saudi Arabia.

Family **Linyphiidae** Blackwall, 1859
Genus ***Prinerigone*** Millidge, 1988
♂ ***Prinerigone vagans arabica*** (Jocqué, 1981) **Only in Saudi Arabia**
Erigone vagans arabica - Jocqué, 1981: 111-113, f. 1-3 (D♂), *Erigone vagans arabica* n. ssp. Material examined: male holotype: Wadi Marba, Khamis Mushayt, 2050 m, 17.IV.1976; 1 juvenile male probably belonging to the same taxon: same date as holorype.

Genus ***Lepthyphantes*** Menge, 1866
Lepthyphantes (?) sp. Jocqué, 1981: 113, Only one specimen was collected, a subadult female from Wadi Khumra, 21.I.1977 (leg. W. Büttiker). It can not be identified to species level.

Genus ***Mermessus*** O.P.-Cambridge, 1899
Mermessus sp. - Abd El-Wakeil *et al.* (2014): Wadi Al-Arj, Taif, Saudi Arabia.

Unidentified species. - Al-Baha, leg. El-Hawagry: 1♀, 18.4.2012, Al-Mekhwa.

Family **Lycosidae** Sundevall, 1833
Genus ***Arctosa*** C.L. Koch, 1847
Arctosa ? sp. - Al-Baha, leg. El-Hawagry: 1♀, 2.1.2012, Dhee Ain.

Genus ***Evippa*** Simon, 1882
♂♀ ***Evippa praelongipes*** (O.P.-Cambridge, 1870)
Evippa praelongipes (O.P.-Cambridge, 1870) - Alderweireldt, 1991: 369-371, f. 5.1-5 (♀, D♂), *Other material examined*. 7♂♂ 2♀♀: Saudi Arabia, Jeddah region, exact locality and date unknown (1980s), A. Faragalla (5♂♂ DBUJ, 1♂ 1♀ MRAC 171.8819 and MRAC 171.820, 1♂ 1♀ PCMA).

Genus ***Hippasa*** Simon, 1885
♂ ***Hippasa sinai*** Alderweireldt & Jocqué, 2005
Hippasa sinai n.sp. - Alderweireldt & Jocqué, 2005: 61-63, f. 38-39 (D♂), Saudi-Arabia: 2♂: Hada Asham area, 21°47'N 039°41'E, nr. 12, 2000–2001, exact date unknown, sweep net alfalfa crop, A. Faragalla (PCMA 1273 and 1274); 1♂: Hada Asham area, 21°47'N 039°410'E, nr. 12, 2000–2001, exact date unknown, pitfall, A. Faragalla (PCMA 1272).

Genus ***Hogna*** Simon, 1885
♂♀ ***Hogna ferox*** (Lucas, 1838)
Hogna ferox - Abd El-Wakeil *et al.* (2014): Wadi Al-Arj, Taif, Saudi Arabia.

Genus ***Ocyale*** Savigny, 1825
♂♀ ***Ocyale pilosa*** (Roewer, 1960)
Ocyale neatalanta n.sp. - Alderweireldt, 1996: 1353-1356, f. 1-3, 5-13, 20, 25 (D♂♀), Saudi-Arabia: 2♂♂: Hoda Alsham area, sweepnetted from alfalfa, A. Faragalla (MRAC 171809); 2♀♀, same locality (MRAC 171811).
Ocyale pilosa (Roewer, 1960) comb.nov. - Alderweireldt & Jocqué, 2005: 63 (♂, S♀).

Genus ***Pardosa*** C.L. Koch, 1847
Pardosa sp. - Abd El-Wakeil *et al.* (2014): Wadi Al-Arj, Taif, Saudi Arabia.

Genus ***Wadicosa*** Zyuzin, 1985
♂♀ ***Wadicosa fidelis*** (O.P.-Cambridge, 1872)
Wadicosa fidelis - Abd El-Wakeil *et al.* (2014): Wadi Al-Arj, Taif, Saudi Arabia.

Family **Mimetidae** Simon, 1881
Ero canionis is recorded by Abd El-Wakeil *et al.* (2014): Wadi Al-Arj, Taif, Saudi Arabia. This maybe a misprint because it is not identified by the same person who identified other species.

Family **Miturgidae** Simon, 1886
Genus ***Cheiracanthium*** C.L. Koch, 1839
♂♀ ***Cheiracanthium molle*** L. Koch, 1875
Cheiracanthium molle L. Koch, 1875 - El-Hennawy, 2011: 114-115, f. 1-6 (♂), Material examined: 1♂, 1s♂, Saudi Arabia, Al-Baha, Gebel El-Baher (20°00'N, 41°27'E, elevation 2170m). Coll. M.S. El-Hawagry, 25 May 2011.

Cheiracanthium sp. - Desouky & El-Hennawy (2012): 1j, Al-Bed'e (Ha'il), 22 July 2010, N 27° 26'39" E 40°49'32".
Cheiracanthium sp. - Abd El-Wakeil *et al.* (2014): Wadi Al-Arj, Taif, Saudi Arabia.

Family **Oecobiidae** Blackwall, 1862
Genus ***Oecobius*** Lucas, 1846
Oecobius sp. - Abha, leg. Sharaf: 1j, 18.I.2004.

Genus ***Uroctea*** Dufour, 1820
Uroctea sp. - Desouky & El-Hennawy (2012): 1s♂, 1s♀, 1j, Toula Mountain, 1 June 2010, N 25°44'00" E 41°05'42"; Al-Asfar Mountain, 14 August 2011, N 25°59'27" E 40°32'55".

Family **Oonopidae** Simon, 1890
Unidentified species. Fawasan, leg. Sharaf: 2♂ 5♀, 25.II.2005.

Family **Oxyopidae** Thorell, 1870
Genus ***Oxyopes*** Latreille, 1804
Oxyopes sp. - Al-Baha, leg. El-Hawagry: 1s♂, 4j, 18.4.2012, Al-Mekhwa.

Genus ***Peucetia*** Thorell, 1869
♂♀ ***Peucetia virescens*** (O.P.-Cambridge, 1872)
Peucetia virescens - Van Niekerk & Dippenaar-Schoeman, 1994: 48, Material Examined. Saudi Arabia: Beirut, Saïda, Mairuba, Djeniu, 1♂, 1 immature ♀ (MNHN 705). = Lebanon.

Family **Palpimanidae** Thorell, 1870
Unidentified species. - Al-Baha, leg. El-Hawagry: 1♀?, 17.5.2012, Rhaghdan.

Family **Philodromidae** Thorell, 1870
Genus ***Halodromus*** Muster, 2009
♂♀ ***Halodromus barbarae*** Muster, 2009
Halodromus barbarae sp.n. - Muster, 2009: 58-60, f. 14, 17-20 (D♂♀), Material examined. Saudi Arabia: Eastern Province: 1♂, Al-Khobar, 26°17'N, 50°12'E, 12 January 1983, leg. E. Heiss (MNHG).

♂♀ ***Halodromus patellidens*** (Levy, 1977)
Halodromus patellidens (Levy, 1977) - Muster, 2009: 66-69, f. 13, 33-36 (T♂♀ from *Ebo*), Material examined. Saudi Arabia: Eastern Province: 1♀, Al-Khobar, 26°17'N, 50°12'E, 12 January 1983, leg. E. Heiss (CTh).

Genus ***Philodromus*** Walckenaer, 1826
Philodromus sp. - Abd El-Wakeil *et al.* (2014): Wadi Al-Arj, Taif, Saudi Arabia.

Genus ***Thanatus*** C.L. Koch, 1837
Thanatus sp. - Al-Baha, leg. El-Hawagry: 1♀, 13.5.2011, Raghdan; 1j, 8.6.2011, 1s♂, 21.12.2011, Ghabet Shohba; 1♀, 5j, 22.2.2012, Al-Mekhwa.

Genus ***Tibellus*** Simon, 1875
♂♀ ***Tibellus vossioni*** Simon, 1884 (Figs. 7-11)
Al-Baha, leg. El-Hawagry: 1♂, 1.6.2011, Gebel El-Baher; 1♂, 8.6.2011, Ghabet Shohba.
Tibellus vossioni Simon, 1884 - Van den Berg & Dippenaar-Schoeman, 1994: 112, f. 2h, 7h (♂).

Family **Pholcidae** C.L. Koch, 1850
Genus ***Artema*** Walckenaer, 1837
♂♀ ***Artema atlanta*** Walckenaer, 1837

Artema atlanta Walckenaer, 1837 - Desouky & El-Hennawy (2012): 3♂, 4♀, 1s♂, 3j, Ha'il City, 22 July 2010, N 27°32'35" E 41°42'15"; Gafar, 15 August 2010, N 27°24'58" E 41°36'15"; Hulaifa, 15 August 2010, N 25°59'38" E 40°49'01"; Samiraa, 15 August 2010, N 26°29'29" E 42°07'28".

Unidentified species. - Al-Baha, leg. El-Hawagry: 1j, 2.1.2012, Dhee Ain.

Family **Salticidae** Blackwall, 1841

Genus ***Aelurillus*** Simon, 1884

♂♀ ***Aelurillus faragallai*** Prószyński, 1993

Aelurillus faragallai n.sp. - Prószyński (1993): 29-32, figs. 1-8, Holotype: ♂, Saudi Arabia: Hada Alsham, alfalfa field, pitfalls, date not given, A.A. Faragalla, NHMB. - Paratypes: 3♂♂, 2♀♀, same data as holotype [association of ♀♀ with ♂♂ and their conspecificity uncertain]; 3♂♂, Tizan-Bayesh area. - Allotype: 1♀, same data as holotype.

Aelurillus sp. - Abd El-Wakeil *et al.* (2014): Wadi Al-Arj, Taif, Saudi Arabia.

Genus ***Afraflacilla*** Berland & Millot, 1941

♂♀ ***Afraflacilla asorotica*** (Simon, 1890)

Pseudicius asoroticus Simon, 1890 - Prószyński (1993): 48-53, figs. 41-47, Material: 1♀, here designated as Lectotype: "10775 *Ps.[eudicius] asoroticus* Ch. Othman Aden!", date not given, Simon, MNHNP. - 4♂♂, 5♀♀, 4 immature specimens, here designated as Paralectotypes: "10775 *Ps.[etrdicius] asoroticus* Ch. Othman Aden!", date not given, Simon, MNHNP. - Comparative material: 2♂♂, 2♀♀ of *Pseudicius wadis* Prószyński, 1989 (separated from a series of specimens labelled: "10775 *Ps.[eudicius] asoroticus* Ch. Othman Aden!"), date not given, Simon, MNHNP.

Pseudicius asoroticus - Prószyn'ski (2003): 148-149, f. 628-629 (♀), Saudi Arabia.

♂♀ ***Afraflacilla wadis*** (Prószyński, 1989)

Pseudicius wadis n.sp. - Prószyński (1989): 57-59, figs. 64-68, Material: Saudi Arabia: Holotype: ♂ Wadi Yamaniyah, 1100 m, 31.III.1980, W. Büttiker. - Paratypes: 1♀, (allotype), 2♂♂ (=♂ # 3). 3♀♀, Wadi Yamaniyah, 1100 m, 31.III.1980, W. Büttiker; 1 ♀, Kushm Dibi, 20.IV.1978, W. Büttiker; 1♀, Wadi Karrar, 10.II.1980; 1♂, Wadi ad Dilla, 550 m, 17.X.1979, W. Büttiker; 1♂, Sanam, 26.VIII.1980, W. Büttiker; 1♂, Wadi Thamamah, 9.XI.1979, W. Büttiker; 1♂, Wadi Majarish, 3.V.1984, W. Büttiker. All NHMB and in coll. J. Prószyński.

Genus ***Bianor*** Peckham & Peckham, 1886

Bianor sp. - Prószyński (1989): 32-33, figs. 1-2, 1♀, Saudi Arabia: Hakimah. 15.-18.11.1980, W. Büttiker, NHMB.

Bianor sp. - Prószyński (1993): 33, ♀ = the same of 1989 paper, Material: Saudi Arabia: 1♀, Western Region, Khulais valley, pitfall traps, date not given, A.A. Faragalla, NHMB. The same species was collected by Prof. W. Büttiker from Hakimah (Prószyński 1989: 32, figs. 1-2). It is probably *Bianor albobimaculatus* (Lucas, 1846), but further revisionary study is needed.

Genus ***Habrocestum*** Simon, 1876

♀ ***Habrocestum arabicum*** Prószyński, 1989 **Only in Saudi Arabia**

Habrocestum arabicum n.sp. - Prószyński (1989): 33-34, figs. 3-4, Material, Holotype ♀: Saudi Arabia: Wadi Zein, 5.11.1979, W. Büttiker, NHMB.

Genus ***Heliophanillus*** Prószyński, 1989

♂♀ ***Heliophanillus fulgens*** (O.P.-Cambridge, 1872)

Heliophanillus arabicus n.sp. - Prószyński (1989): 35-37, figs. 9-11, Material, Holotype: ♂, Saudi Arabia: Riyadh, 4.XII. 1979. A. S.Talhouk, NHMB.

Genus ***Heliophanus*** C.L. Koch, 1833

♂♀ ***Heliophanus saudis*** Prószyński, 1989

Heliophanus (Heliocapensis) saudis n.sp. - Prószyński (1989): 35, 37, figs. 5-8, Material, Holotype: ♂, Saudi Arabia: Thanomah, 1950 m, 11.IV.1980, W. Büttiker, NHMB.

Heliophanus saudis - Al-Baha, leg. El-Hawagry: 2♂, 14.3.2012, W. Turabet Zahran.

Genus ***Langona*** Simon, 1901

♂♀ ***Langona pallida*** Prószyński, 1993

Langona pallida n.sp. - Prószyński (1993): 33-35, figs. 9-11, Holotype: ♂ (with palp separated), Saudi Arabia: Hada Alsham, alfalfa field, pitfall, date not given, A.A. Faragalla, NHMB. - Paratype: 1♂, same data as holotype.

Genus ***Menemerus*** Simon, 1868

♂♀ ***Menemerus animatus*** O.P.-Cambridge, 1876

Menemerus animatus O.P.-Cambridge, 1876 - Prószyński (1993): 35-37, figs. 12-15, Material: Saudi Arabia: 1♂, Western Region, Khulais valley, pitfall traps, date not given, A.A. Faragalla, NHMB.

♂ ***Menemerus arabicus*** Prószyński, 1993 **Only in Saudi Arabia**

Menemerus arabicus n.sp. - Prószyński (1993): 37-39, figs. 16-19, Holotype: ♂, Western Region, Khulais valley, pitfall traps, date not given, A.A. Faragalla, NHMB.

♂♀ ***Menemerus fagei*** Berland & Millot, 1941

Menemerus cf. *bivittatus* (Dufour, 1831) - Prószyński (1989): 37-39, figs. 12-17, Material: Saudi Arabia: 1♂, 4♀♀, Riyadh, 5.-15.XII. 1979, A.S. Talhouk, NHMB; 1♂, Al Khardi, 2.I.1980, A.S. Talhouk, NHMB.

Genus ***Mogrus*** Simon, 1882

♂♀ ***Mogrus fulvovittatus*** Simon, 1882

Mogrus fulvovittatus Simon, 1882 - Prószyński (1989): 41-42, figs. 21-22, Material: 1♂, Saudi Arabia: Wadi Phi Khul, Jebel, 20.II.1980, W. Büttiker, NHMB.

♂♀ ***Mogrus mathisi*** (Berland & Millot, 1941)

Mogrus dillae n.sp. - Prószyński (1989): 40, figs. 18-20, Material: Holotype: ♀, Saudi Arabia: Wadi ad Dilla, 550 m, 17.X.1979, W. Büttiker, NHMB.

♂♀ ***Mogrus mirabilis*** Wesolowska & van Harten, 1994

Mogrus mirabilis Wesolowska & van Harten, 1994 - Logunov, 2004: 88, f. 8-14 (♀, D♂), Distribution. .. Saudi Arabia.

Mogrus mirabilis Wesolowska & van Harten, 1994 - Desouky & El-Hennawy (2012): 1♂, Mo'Arrash, 1 June 2010, N 25°59'31" E 40°58'15".

♀ ***Mogrus sinaicus*** Prószyński, 2000

Mogrus sinaicus sp.n. - Prószyński, 2000: 255-256, f. 89-92 (D♀), Paratype: 1♀ (NHM), "*Mogrus* sp. 1", Saudi Arabia, Khasm Khafs, 6.IV.1980, leg. W. Büttiker.

Mogrus sinaicus Prószyński, 2000 - Prószyński, 2003: 105-107, f. 401, 433-435 (♀), Saudi Arabia - Khasm Khafs.

Genus ***Myrmarachne*** MacLeay, 1839
♂♀ ***Myrmarachne tristis*** (Simon, 1882)
Myrmarachne tristis (Simon, 1882) - Prószyński (1989): 44-47, figs. 37-43, Material: 1♂, Saudi Arabia: Wadi ad Dilla, 550 m, 17.X.1979, W. Büttiker, NHMB. (+ numerous immature specimens).

Genus ***Neaetha*** Simon, 1884
♂♀ ***Neaetha oculata*** (O.P.-Cambridge, 1876)
Neaetha oculata (O.P.-Cambridge, 1876) - Prószyński (1993): 39-43, figs. 20-27, Material: Saudi Arabia: 1♂, Hada Alsham, alfalfa field, pitfall and sweeping, date not given, A.A. Faragalla, NHMB.
Neaetha oculata - Abd El-Wakeil *et al.* (2014): Wadi Al-Arj, Taif, Saudi Arabia.

Genus ***Pellenes*** Simon, 1876
♂ ***Pellenes hadaensis*** Prószyński, 1993 **Only in Saudi Arabia**
Pellenes hadaensis n.sp. - Prószyński (1993): 43-44, figs. 28-31, Holotype: ♂, Saudi Arabia: Hada Alsham, alfalfa field, pitfall and sweeping, date not given, A.A. Faragalla, NHMB.

♂♀ ***Pellenes hedjazensis*** Prószyński, 1993
Pellenes heqazensis n.sp. - Prószyński (1993): 44-46, figs. 32-36, Holotype: ♂ (specimen with distinct dark abdominal stripes), Saudi Arabia: Hijaz region, Jeddah area, VIII.1985-IV.1986, A.A. Faragalla, AMNH. - Paratypes : 2♂♂, same data as holotype.

Genus ***Plexippoides*** Prószyński, 1984
♂♀ ***Plexippoides flavescens*** (O.P.-Cambridge, 1872)
Plexippoides arabicus n.sp. - Prószyński (1989): 47-49, figs. 44-45, Material: Holotype: 1♂, Saudi Arabia: Sharoura, 27.III.1979, A.S.Talhouk & W. Büttiker, NHMB. - Paratypes: 1♂, Saudi Arabia, Al Khardi, 2.I.1980, A. S.Talhouk & W. Büttiker, coll. J. Prószyński.

Genus ***Plexippus*** C.L. Koch, 1846
♂♀ ***Plexippus paykulli*** (Audouin, 1825)
Plexippus paykulli (Savigny & Audouin, 1827) - Prószyński (1993): 47, Material: Saudi Arabia: 2♀♀, Western Region, Khulais village, old house, date not given; 1♂, Jeddah, Nissan office, date not given; 2♂♂, Rehab district, date not given. All A.A. Faragalla, NHMB.

Plexippus sp.? - Desouky & El-Hennawy (2012): 1j(s♀); 1♀; 1j Unidentified species, Om Sanman, 25 May 2010, N 40°53'35" E 28°07'12"; Aga Mountain, 1 August 2011, N 27°28'10" E 40°15'05".

Genus ***Pseudicius*** Simon, 1885
♂♀ ***Pseudicius braunsi*** Peckham & Peckham, 1903
Pseudicius tripunctatus n.sp. - Prószyński (1989): 53-54, figs. 53-55, Material: Holotype: ♀, Saudi Arabia: Ash Sharayi, 24.IX.1978, W. Büttiker, NHMB.

♀ ***Pseudicius sheherezadae*** Prószyński, 1989
Pseudicius sheherezadae n.sp. - Prószyński (1989): 49-50, figs. 46-47, Material: Holotype: ♀, Saudi Arabia: Thanomah, 2140 m, 11.IV.1980, W. Büttiker, NHMB.

♂ ***Pseudicius shirinae*** Prószyński, 1989 **Only in Saudi Arabia**
Pseudicius shirinae n.sp. - Prószyński (1989): 50-51, figs. 48-49, Material: Holotype: ♂, Saudi Arabia: Wadi Harth. 28.IX.1978, W. Büttiker, NHMB.

♂ ***Pseudicius sindbadi*** Prószyński, 1989 **Only in Saudi Arabia**
Pseudicius sindbadi n.sp. - Prószyński (1989) 51-52, figs. 50-52, Material: Holotype: ♂, Saudi Arabia: Thanomah, 2140 m, 11.IV.1980, W. Büttiker, NHMB. - Paratypes: 1♂, same data, coll. J. Prószyński; 1 juv., same data, coll. J. Prószyński.

♂♀ ***Pseudicius tamaricis*** Simon, 1885
Pseudicius tamaricis Simon, 1885 - Prószyński (1989): 53-57, figs. 56-63, Material: Saudi Arabia: 5♂♂, 2♀♀, 3 juv., Hofut, 21.V.1980, A.S. Talhouk; 1♂, Riyadh, 5.XII.1979, A.S. Talhouk; 1♀, 1 juv., Jebel an Nir, 990 m, 12.IX.1979, W. Büttiker, NHMB.

Genus ***Stenaelurillus*** Simon, 1886
Stenaelurillus sp. - Prószyński (1993): 47, Material: Saudi Arabia: 1♂ (both palps missing), Hada Alsham, alfalfa field, pitfall and sweeping, date not given, A.A. Faragalla, NHMB.

Genus ***Thyene*** Simon, 1885
♂♀ ***Thyene imperialis*** (Rossi, 1846)
Thyene imperialis (Rossi, 1846) - Prószyński (1989): 59-63, figs. 69-72, Material: Saudi Arabia: 11♂♂, 8♀♀, Riyadh; 25.IX. 1978, 10.II., 13.,25.XI., 1.,4.,5.,12.,15.,16.XII.1979, 12.II.1980, AI Khardj, 19.1.1980, A.S. Talhouk, NHMB; 1♂, Bani Sharfa, 12.II.1980, W. Büttiker, NHMB; 1♂ , Hofuf, 3.I.1980, W. Büttiker, NHMB; 1♀, Riyadh, 20.VIII.1981, W. Büttiker, NHMB.
Thyene imperialis (Rossi, 1846) - Prószyński (1993): 48, Material: Saudi Arabia: 3♂♂, Western Region, Khulais valley, pitfall traps, on green plant, date not given, A.A. Faragalla, NHMB.
Thyene imperialis - Al-Baha, leg. El-Hawagry: 1♂, 22.2.2012, 1♂, 1s♂, 2j, 18.4.2012, Al-Mekhwa.

Genus ***Yllenus*** Simon, 1868
♂♀ ***Yllenus saliens*** O.P.-Cambridge, 1876
Yllenus arabicus n.sp. - Prószyński (1993): 48-49, figs. 37-40, Holotype: ♂, Saudi Arabia: Hada Alsham, alfalfa field, pitfall and sweeping, date not given, A.A. Faragalla, NHMB.

Family **Scytodidae** Blackwall, 1864
Genus ***Scytodes*** Latreille, 1804
♂♀ ***Scytodes univittata*** Simon, 1882
Scytodes univittata - Abd El-Wakeil *et al.* (2014): Wadi Al-Arj, Taif, Saudi Arabia.

Scytodes sp. - Desouky & El-Hennawy (2012): 2j Rujama Village, 13 August 2011, N 27°56 40" E 42°07'12".

Family **Selenopidae** Simon, 1897

Genus ***Selenops*** Latreille, 1819

Selenops sp. - Desouky & El-Hennawy (2012): 1♀ 1j, Ash-Shuwayms, 30 July 2010, N 26°13'13" E 40°24'17".

Family **Sicariidae** Keyserling, 1880

Genus ***Loxosceles*** Heineken & Lowe, 1832

♂♀ ***Loxosceles rufescens*** (Dufour, 1820)

Loxosceles rufescens (Dufour, 1820) - Desouky & El-Hennawy (2012): 2♂, Rujama Village, 13 August 2011, N 27°56'40" E 42°07'12".

Family **Sparassidae** Bertkau, 1872

Genus ***Cebrennus*** Simon, 1880

♂♀ ***Cebrennus aethiopicus*** Simon, 1880

Cebrennus aethiopicus Simon, 1880 - Jäger, 2000: 176-178, f. 49-55 (♂, D♀), Material examined: 1 male (PJ 1348, with label: Saudi Arabien, W. Büttiker / Jeddah [= Gidda, Djidda], 31.I.1984 / Sparassidae male [Heteropodidae]). 1 female (PJ 1349, with label: Saudi Arabien, W. Büttiker / Wadi Hanaq, 100 m, 10.II.1984, 22°49'N, 39°22'E/ female Heteropodidae, g[enus]. ?, det. J.A. Murphy 1988.). 1 female (PJ 1350, with label: Saudi Arabien, W. Büttiker / Harithi, 20./21. [?] 1985, 21°18'N, 40°18'E/ female Heteropodidae, g[enus]. ?, det. J.A. Murphy 1988.). [Formerly dried out; no measurements were taken]), all NHMB.

♂ ***Cebrennus intermedius*** Jäger, 2000 **Only in Saudi Arabia**

Cebrennus intermedius sp.n. - Jäger, 2000: 178-179, f. 61-67 (D♂), Type material. 1 male holotype (PJ 1365, with label: Chicago Nat. Hist. Museum, 3 spiders, Dhahran, opp. Bahrein Is., Saudi Arabia, Col. + pres. by T.C. Barger + L.M. Snyder, Rec'd IV:5:44), 2 males paratypes (PJ 1366, 1367, with same data as holotype) FMNH (PJ 1365, 1366), SMF (PJ 1367).

Genus ***Cerbalus*** Simon, 1897

Cerbalus sp. ? - Desouky & El-Hennawy (2012): 1♂, 2j, NADEC Co, 1 June 2010, N 27°30'16" E 42°40'15".

Genus ***Eusparassus*** Simon, 1903

♂♀ ***Eusparassus arabicus*** Moradmand, 2013

Eusparassus arabicus spec. nov. - Moradmand, 2013: 19-23, f. 7a-e, 8a-c, 47d-e, 59e-f (D♂♀), Type material. Holotype: male, Saudi Arabia: *Mintaqat ar Riyad*: Wadi Mizbil [N 24° 30', E 46° 25'], 13 April 1977, W. Büttiker leg. (NMB-ARAN 20666). Paratypes (4♂♂, 1♀): Saudi Arabia: 1♂, same data as for holotype (SMF); *Mintaqat al Hail*: 1♀, Wadi Naqben [in Jebel Aja Mountain], N 27°41', E 41°38', 1050 m, 27 May 1981, W. Büttiker leg. (NMB-ARAN 20667); *Mintaqat Makkah*: 1♂, Abha, Asir Mountains, 2200 m, April 1977, Dr. C. Lowe leg. (NHM); 1♂, Abulat Island, Red Sea, "Mission de la Calypso Mer Rouge 1952", Cherbounier leg. (MNHN).

♂♀ ***Eusparassus laevatus*** (Simon, 1897) (Figs. 12-14)

Eusparassus laevatus (Simon, 1897) comb. nov. - Moradmand, 2013: 16-19, f. 4a-c, 5a-e, 6a-d, 47a-c, 59c-d (T♂ from *Olios*, D♂), 1♂, Arabian, A.B. Derewal leg. (NHM 99.12.2.16); *Al Bahah*: 1♂, Bani Sar, 29 February–7 March 1984, W. Büttiker leg. (NMB); 2♂♂, 1♀, An-Namas, 17 April 1980, 2380 m, W. Büttiker leg. (NMB); 1♂, 1♀,

An-Namas, 19 September 1980, 2380 m, W. Büttiker leg. (NMB); 1♀, Wadi Damad, 800 m, 24 September 1981, W. Büttiker leg. (NMB).
Eusparassus laevatus - Al-Baha, leg. El-Hawagry: 1♀, 13.5.2011, Raghdan.

♂♀ ***Eusparassus walckenaeri*** (Audouin, 1825)
Eusparassus walckenaeri (Audouin, 1825) - Desouky & El-Hennawy (2012): 2♀, 3j, Gulaib, 29 April 2010, N 28°36'40" E 42°24'34"; Ha'il City, 29 April 2010, N 27°33'11" E 41°41'11"; Setehat Juppa, 29 April 2010, N 27°58'18" E 40°49'13"; Great Nofood, 1 June 2010, N 27°39'25" E 40°57'54"; NADEC Co, 1 June 2010, N 27°30'16" E 42°40'15". [This species may be misidentified. The studied specimens may belong to *Eusparassus arabicus*. See note 4, p. 43.]

Family **Theraphosidae** Thorell, 1869
Genus ***Chaetopelma*** Ausserer, 1871
♂♀ ***Chaetopelma olivaceum*** (C.L. Koch, 1841)
Chaetopelma olivaceum (C.L. Koch 1841) - Guadanucci & Gallon, 2008: 36-39, f. 1-10 (♂♀, S), Additional material examined: Saudi Arabia: 1♂2♀ (SMF 2661) E. Rüppell *leg.*

Unidentified species. - Desouky & El-Hennawy (2012): 1j, Rujama Village, 13 August 2011, N 27°56'40" E 42°07'12".

Family **Theridiidae** Sundevall, 1833
Genus ***Latrodectus*** Walckenaer, 1805
♂♀ ***Latrodectus dahli*** Levi, 1959
Latrodectus dahli Levi, 1959 - Knoflach & van Harten (2002): 334 - Saudi Arabia: 1♀, Riyadh surroundings, 24°43'N 46°45'E, 600 m, X.1976, W. Büttiker, NHMB; 1♀, al-Khardji, 19.I.1980, A.M. Talhouk, NHMB; 1♀, 35 km NE of Dawadimi, 810 m, III.1983, W. Büttiker, NHMB.

♂♀ ***Latrodectus geometricus*** C.L. Koch, 1841
Latrodectus geometricus C.L. Koch, 1841 - Knoflach & van Harten (2002): 340 - Saudi Arabia: 1 juv. ♀, Wadi ad-Dilla, 550 m, 17.X.1979, W. Büttiker, NHMB.

♂♀ ***Latrodectus renivulvatus*** Dahl, 1902
Latrodectus renivulvatus Dahl, 1902 - Knoflach & van Harten (2002): 353 – Saudi Arabia: 1♀, Riyadh, 24°43'N 46°45'E, 600 m, 24.V.1981, W. Büttiker, NHMB; 1♀, BAC Camp, Khamis Mushayt, 18°18'N 42°48'E, 2000 m, 14.IV.1980, W. Büttiker, NHMB**.**

♂♀ ***Latrodectus tredecimguttatus*** (Rossi, 1790)
Latrodectus tredecimguttatus (Rossi, 1790) - Desouky & El-Hennawy (2012): 2♀, 1s♀, Salma Mountain, 25 May 2010, N 42°35'15" E 27°15'02"; Aga Mountain, 21 August 2010, N 27°31'20" E 40°16'02".

Genus ***Paidiscura*** Archer, 1950
♂♀ ***Paidiscura dromedaria*** (Simon, 1880)
Paidiscura dromedaria (Simon, 1880) - Knoflach & Thaler, 2000: 429-431, f. 30, 33, 36, 41-43, 58 (♂♀, S), Saudi Arabia: Dhahram, Al Khobar, sand dune, 1♀ 5.6.1982, leg. Heiss. Wadi Nimar 21°08'N/40°58'E 1500 m, 1♀ juv NMB 19.-20.5.1983, leg. Büttiker.

Genus ***Steatoda*** Sundevall, 1833
♂♀ ***Steatoda paykulliana*** (Walckenaer, 1805)
Steatoda paykulliana - Abd El-Wakeil *et al.* (2014): Wadi Al-Arj, Taif, Saudi Arabia.

Genus ***Theridion*** Walckenaer, 1805
♀ ***Theridion spinitarse*** O.P.-Cambridge, 1876
Theridion spinitarse O.P.-Cambridge, 1876 - Knoflach, Rollard & Thaler, 2009: 256-257, f. 78-79 (♀), Saudi Arabia: Wadi Karrar, 3♀ (NHMB), 10.2.1980, leg. W. Büttiker.

Unidentified species. Al-Baha, leg. El-Hawagry: 1♀, 17.5.2012, Rhaghdan.

Family **Thomisidae** Sundevall, 1833
Genus ***Ansiea*** Lehtinen, 2005
♂♀ ***Ansiea buettikeri*** (Dippenaar-Schoeman, 1989) **Only in Saudi Arabia**
Misumena buettikeri n.sp. - Dippenaar-Schoeman, 1989: 27-29, f. 7a-d (D♂♀), Holotype: ♂, Saudi Arabia: Wadi Majarish, 7.-18.II.1980, W. Büttiker, NHMB. – Paratypes: 2♀♀, Saudi Arabia: Wadi Majarish, 7. & 10.II.1980, W. Büttiker, NHMB.

Genus ***Ozyptila*** Simon, 1864
♂♀ ***Ozyptila rigida*** (O.P.-Cambridge, 1872)
Oxyptila rigida (O. Pickard-Cambridge, 1872) - Dippenaar-Schoeman, 1989: 26, f. 5 (♀), Saudi Arabia: 1♀, Al Dehaba, 10.X.1979, W. Büttiker.

Genus ***Runcinia*** Simon, 1875
♂♀ ***Runcinia grammica*** (C.L. Koch, 1837) (Figs. 15-18)
Runcinia grammica - Al-Baha, leg. El-Hawagry: 1♂, 2s♂, 11j, 22.2.2012, 1♂, 3j, 18.4.2012, Al-Mekhwa.

Genus ***Synema*** Simon, 1864
♂♀ ***Synema diana*** (Audouin, 1825)
Synaema diana (Audouin, 1826) - Dippenaar-Schoeman, 1989: 30, f. 8 (♂), Saudi Arabia: 1♂, 4 juveniles, Wadi Hanifa, 7.V.1976, W. Büttiker; 1 juvenile, Bani Rizam, 12.IV.1980, W. Büttiker; 1 juvenile, Thanomah, 2140 m alt, 11.IV.1980, W. Büttiker; 1 juvenile, Wadi Khumra, 6.IX.1976, W. Büttiker; 2 juveniles, Wadi Majarish, 10.II.1980, W. Büttiker; 2 juveniles, Wadi Mizbil, 25.II.1977, W. Büttiker; 1 juvenile, Wadi Shija (desert), 4.XI.1976, W. Büttiker.

Synema sp. - Al-Baha, leg. El-Hawagry: 1j, 22.2.2012, Al-Mekhwa.

Genus ***Thomisus*** Walckenaer, 1805
♂♀ ***Thomisus arabicus*** Simon, 1882
Thomisus arabicus Simon, 1882 - Dippenaar-Schoeman & van Harten, 2007: 173, f. 5-6 (♀), Distribution. .. Saudi Arabia.

♂♀ ***Thomisus bidentatus*** Kulczyński, 1901
Thomisus bidentatus Kulczyński, 1901 - Dippenaar-Schoeman, 1989: 22-23, f. 1 (♂), Saudi Arabia: 1♂, Wadi Majarish, 7.-18.II.1980, W. Büttiker.
Thomisus bidentatus - Al-Baha, leg. El-Hawagry: 1♂, 2s♂, 1s♀, 4j, 1.6.2011, 1s♀, 25.5.2011, Gebel El-Baher; 1s♀, 13.5.2011, Raghdan; 2s♀, 13j, 14.3.2012, W. Turabet Zahran.

♂♀ ***Thomisus citrinellus*** Simon, 1875
Thomisus citrinellus Simon, 1875 - Dippenaar-Schoeman, 1989: 23, f. 2a-b (♂♀), Saudi Arabia: 3♀♀, Riyadh, 15.XII.1979, A.S. Talhouk; 1♀, 1♂, Riyadh, 25.XII.1979, A.S. Talhouk; 3♀♀, Riyadh, 4.XII.1979, A.S. Talhouk; 4♀♀, Al Khardj, 19.I.1980, A.S. Talhouk; 1♀, Wadi Majarish, 250 m alt, 7.IV.1980, W. Büttiker.

♂♀ ***Thomisus daradioides*** Simon, 1890
Thomisus daradioides Simon, 1890 - Dippenaar-Schoeman & van Harten, 2007: 177-179, f. 16-18 (♂♀), p.179 Distribution. .. Saudi Arabia.

♂♀ ***Thomisus zyuzini*** Marusik & Logunov, 1990
T. onustus Dippenaar-Schoeman, 1989: 24, f. 3a-b (♂♀, misidentified), Saudi Arabia: 1♂, Riyadh (radio station), 18.II.1975, W. Büttiker; 1♀, Riyadh, 25.IX.1978, A.S. Talhouk; 1♂, Wadi Shaib Luha, 15.I.1977, W. Büttiker; 1♀, 1 immature ♀, Wadi Hanifa, 7.V.1976, W. Büttiker; 1♂, Wadi Durmah, 27.IV.1976, W. Büttiker & W. Wittmer; 1♂, Chureis, 3.VI.1976, W. Büttiker.
Thomisus zyuzini Marusik & Logunov, 1990 - Marusik & Logunov, 1995: 144-145, f. 19-20 (D♂), Distribution. ..Saudi Arabia.

Genus ***Tmarus*** Simon, 1875
♂♀ ***Tmarus longicaudatus*** Millot, 1942
Tmarus longicaudatus Millot, 1942 - Dippenaar-Schoeman, 1989: 24-25, f. 4a-c (♀), Saudi Arabia: 1♀, Wadi Hanifa, 7.V.1976, W. Büttiker; 1 juvenile, Wadi Mizbil, 25.II.1977, W. Büttiker; 3 juveniles, Wadi Mizbil, 10.-11.VI.1976, W. Büttiker; 1 juvenile, Quwayiyah, 2.-13.III.1978, W. Büttiker; 1 immature ♀, 2 juveniles, Wadi Khumra, 21.I.1977, W. Büttiker; 1 juvenile, Wadi Khumra, 9.-10.IX.1976, W. Büttiker; 1 juvenile, Wadi Tabala, 20.X.1979, W. Büttiker; 1 juvenile, Wadi Wajj (18 km SW of Taif) 1800 m alt, 5.X.1979, W. Büttiker.

Genus ***Xysticus*** C.L. Koch, 1835
♂♀ ***Xysticus tristrami*** (O.P.-Cambridge, 1872)
Xysticus tristrami (O. Pickard-Cambridge, 1872) - Dippenaar-Schoeman, 1989: 27, f. 6a-b (♂♀), Saudi Arabia: 1♀, village Qaraah, 2000 m alt, 16.IV.1976, W. Büttiker & W. Wittmer; 1♂, BAC Camp Khamis Mushayt, 2000 m alt, 15.XI.1977, W. Büttiker; 1♂, Namas, 2330 m alt, II.1981, G. Vogel.

Family **Uloboridae** Thorell, 1869
Genus ***Uloborus*** Latreille, 1806
Uloborus sp. - Abd El-Wakeil *et al.* (2014): Wadi Al-Arj, Taif, Saudi Arabia.

Family **Zodariidae** Thorell, 1881
Genus ***Lachesana*** Strand, 1932
♂ ***Lachesana insensibilis*** Jocqué, 1991 **Only in Saudi Arabia**
Lachesana insensibilis n.sp. - Jocqué, 1991: 37-39, f. 59 (D♂), Type Material: Holotype male: Saudi Arabia, Khulais Valley, N of Jeddah, 1987, pitfall, A. Faragalla (MRAC 169818).

Genus ***Trygetus*** Simon, 1882
♀ ***Trygetus riyadhensis*** Ono & Jocqué, 1986
Trygetus riyadhensis n.sp. - Ono & Jocqué, 1986: 9-10, f. 5-7 (D♀), Material: Holotype: ♀, Saudi Arabia: Wire-less Station, Riyadh, 18.II.1975, W. Büttiker, NHMB 2360.

Genus ***Zodarion*** Walckenaer, 1826

♂♀ ***Zodarion buettikeri*** (Ono & Jocqué, 1986) **Only in Saudi Arabia**

Acanthinozodium buettikeri n.sp. - Ono & Jocqué, 1986: 7-9, f. 1-4 (D♂♀), Material: Holotype: ♀, Saudi Arabia: Wadi Khumra, 60 km NW of Riyadh, 16.XI.1979, W. Büttiker, NHMB 2359a. - Paratypes: 1♂, same locality as holotype, 19.XI.1977, W. Büttiker, NHMB 2359b; 1♂, Saudi Arabia: Hieth, 40 km S of Riyadh, 13.V.1977, W. Büttiker, NHMB 2359c.

List of Spiders of Saudi Arabia

* = endemic, only in Saudi Arabia

Family **Agelenidae** C.L. Koch, 1837
Benoitia lepida (O.P.-Cambridge, 1876)
Family **Araneidae** Clerck, 1757
Family **Corinnidae** Karsch, 1880
Family **Eresidae** C.L. Koch, 1845
Stegodyphus lineatus (Latreille, 1817)
Family **Gnaphosidae** Pocock, 1898
Micaria sp.
Poecilochroa senilis (O.P.-Cambridge, 1872)
Pterotricha dalmasi Fage, 1929
Pterotricha lesserti Dalmas, 1921
Setaphis subtilis (Simon, 1897)
Synaphosus khashm Ovtsharenko, Levy & Platnick, 1994 *
Synaphosus syntheticus (Chamberlin, 1924)
Trachyzelotes jaxartensis (Kroneberg, 1875)
Zelotes laetus (O.P.-Cambridge, 1872)
Family **Linyphiidae** Blackwall, 1859
Prinerigone vagans arabica (Jocqué, 1981) *
Lepthyphantes sp.
Mermessus sp.
Family **Lycosidae** Sundevall, 1833
Arctosa sp.
Evippa praelongipes (O.P.-Cambridge, 1870)
Hippasa sinai Alderweireldt & Jocqué, 2005
Hogna ferox (Lucas, 1838)
Ocyale pilosa (Roewer, 1960)
Pardosa sp.
Wadicosa fidelis (O.P.-Cambridge, 1872)
Family **Mimetidae** Simon, 1881
Family **Miturgidae** Simon, 1886
Cheiracanthium molle L. Koch, 1875
Family **Oecobiidae** Blackwall, 1862
Oecobius sp.
Uroctea sp.
Family **Oonopidae** Simon, 1890
Family **Oxyopidae** Thorell, 1870
Oxyopes sp.
Peucetia sp.
Family **Palpimanidae** Thorell, 1870
Family **Philodromidae** Thorell, 1870
Halodromus barbarae Muster, 2009
Halodromus patellidens (Levy, 1977)
Philodromus sp.
Thanatus sp.
Tibellus vossioni Simon, 1884
Family **Pholcidae** C.L. Koch, 1850
Artema atlanta Walckenaer, 1837
Family **Salticidae** Blackwall, 1841
Aelurillus faragallai Prószyński, 1993
Afraflacilla asorotica (Simon, 1890)
Afraflacilla wadis (Prószyński, 1989)
Bianor sp.
Habrocestum arabicum Prószyński, 1989 *
Heliophanillus fulgens (O.P.-Cambridge, 1872)
Heliophanus saudis Prószyński, 1989
Langona pallida Prószyński, 1993
Menemerus animatus O.P.-Cambridge, 1876
Menemerus arabicus Prószyński, 1993 *
Menemerus fagei Berland & Millot, 1941
Mogrus fulvovittatus Simon, 1882
Mogrus mathisi (Berland & Millot, 1941)
Mogrus mirabilis Wesolowska & van Harten, 1994
Mogrus sinaicus Prószyński, 2000
Myrmarachne tristis (Simon, 1882)
Neaetha oculata (O.P.-Cambridge, 1876)
Pellenes hadaensis Prószyński, 1993 *
Pellenes hedjazensis Prószyński, 1993
Plexippoides flavescens (O.P.-Cambridge, 1872)
Plexippus paykulli (Audouin, 1825)
Pseudicius braunsi Peckham & Peckham, 1903

Pseudicius sheherezadae Prószyński, 1989
Pseudicius sindbadi Prószyński, 1989 *****
Stenaelurillus sp.
Yllenus saliens O.P.-Cambridge, 1876
Family **Scytodidae** Blackwall, 1864
Family **Selenopidae** Simon, 1897
Family **Sicariidae** Keyserling, 1880
Family **Sparassidae** Bertkau, 1872
Cebrennus aethiopicus Simon, 1880
Cerbalus sp.
Eusparassus laevatus (Simon, 1897)
Family **Theraphosidae** Thorell, 1869
Family **Theridiidae** Sundevall, 1833
Latrodectus geometricus C.L. Koch, 1841
Latrodectus tredecimguttatus (Rossi, 1790)
Steatoda paykulliana (Walckenaer, 1805)
Family **Thomisidae** Sundevall, 1833
Ozyptila rigida (O.P.-Cambridge, 1872)
Synema diana (Audouin, 1825)
Thomisus bidentatus Kulczyński, 1901
Thomisus daradioides Simon, 1890
Tmarus longicaudatus Millot, 1942
Family **Uloboridae** Thorell, 1869
Family **Zodariidae** Thorell, 1881
Trygetus riyadhensis Ono & Jocqué, 1986
Pseudicius shirinae Prószyński, 1989 *****
Pseudicius tamaricis Simon, 1885
Thyene imperialis (Rossi, 1846)

Scytodes univittata Simon, 1882
Selenops sp.
Loxosceles rufescens (Dufour, 1820)

Cebrennus intermedius Jäger, 2000 *
Eusparassus arabicus Moradmand, 2013
Eusparassus walckenaeri (Audouin, 1825)
Chaetopelma olivaceum (C.L. Koch, 1841)
Latrodectus dahli Levi, 1959
Latrodectus renivulvatus Dahl, 1902
Paidiscura dromedaria (Simon, 1880)
Theridion spinitarse O.P.-Cambridge, 1876
Ansiea buettikeri (Dippenaar-Schoeman, 1989)*****
Runcinia grammica (C.L. Koch, 1837)
Thomisus arabicus Simon, 1882
Thomisus citrinellus Simon, 1875
Thomisus zyuzini Marusik & Logunov, 1990
Xysticus tristrami (O.P.-Cambridge, 1872)
Uloborus sp.
Lachesana insensibilis Jocqué, 1991 *
Zodarion buettikeri (Ono & Jocqué, 1986) *****

Family	Genera	Species	Endemic
AGELENIDAE	1	1	-
ARANEIDAE	-	-	-
CORINNIDAE	-	-	-
ERESIDAE	1	1	-
GNAPHOSIDAE	7	8	1
LINYPHIIDAE	3	1	1
LYCOSIDAE	7	5	-
MIMETIDAE	-	-	-
MITURGIDAE	1	1	-
OECOBIIDAE	2	-	-
OONOPIDAE	-	-	-
OXYOPIDAE	2	-	-
PALPIMANIDAE	-	-	-
PHILODROMIDAE	4	3	-
PHOLCIDAE	1	1	-
SALTICIDAE	18	27	5
SCYTODIDAE	1	1	-
SELENOPIDAE	1	-	-
SICARIIDAE	1	1	-
SPARASSIDAE	3	5	1
THERAPHOSIDAE	1	1	-
THERIDIIDAE	4	7	-
THOMISIDAE	7	11	1

ULOBORIDAE	1	-	-
ZODARIIDAE	3	3	2
Total 25	69	77	11

Key to spider families recorded from Saudi Arabia *

All Saudi Arabian spiders belong to Opisthothelae [abdomen not segmented; spinnerets are on posterior end of abdomen].

1. Two pairs of booklungs; fangs closing in longitudinal axis … Mygalomorphae ……. ……... Theraphosidae
-. One pair of booklungs or absent; fangs closing in transverse axis ... Araneomorphae .. 2

2. Cribellum and calamistrum present, sometimes absent in males .. Cribellate spiders .. 3
-. Cribellum and calamistrum absent ..... Ecribellate spiders 5

3. Anal tubercle large, two-jointed with fringe of long curved setae …… ……... Oecobiidae (Oecobiinae)
-. Anal tubercle normal, a single segment …… 4

4. Femora with rows of long trichobothria; metatarsi IV compressed and curved under line of calamistrum; first pair of legs clearly longer than second pair ……... Uloboridae
-. Femora without rows of long trichobothria; metatarsi IV not compressed and curved; first pair of legs not longer than second pair …… Eresidae

5. Anal tubercle large, two-jointed with fringe of long curved setae ……. ……... Oecobiidae (Urocteinae)
-. Anal tubercle normal, a single segment …… 6

6. Six eyes 7
-. Eight eyes 9

7. Carapace domed towards thoracic region …….. Scytodidae
-. Carapace differently shaped ……... 8

8. Tracheal spiracles distinct, anteriorly positioned, just behind epigastric groove …. ……. Oonopidae
-. Tracheal spiracle single, inconspicuous, positioned just in front of spinnerets …. ……... Sicariidae

9. Tarsus with three claws 10
-. Tarsus with two claws 12

10. Posterior median eyes flat, without dome-shaped lens; endites obliquely depressed; Anterior spinnerets terminal; without long setae on spigots …..……..... Gnaphosidae
-. Posterior median eyes with dome-shaped lens; endites usually not obliquely depressed ……... 11

11. Posterior spinnerets clearly two-segmented with distal segment distinctly conical …… Miturgidae (in part Eutichurinae and Miturginae)
-. Posterior spinnerets with one segment only or if two-segmented, distal segment rounded …… Corinnidae (Trachelinae & Corinninae)

12. Anterior pair of legs much stronger than other legs; metatarsi and tibiae I with strong prolateral scopulae ……..... Palpimanidae
-. Anterior pair of legs different …..……..... 13

13. Eyes in three rows (4:2:2); anterior median eyes very large; jumping spiders …… ……... Salticidae
-. Eyes arranged differently ……. 14

14. Legs laterigrade, directed towards sides …… 15
-. Legs prograde, directed forwards (I, II) and backwards (III, IV) …… 18

15. Flat spiders with eyes in two rows (6:2) ……. Selenopidae
-. Eyes differently arranged …….. 16

16. Tarsi and metatarsi without scapulae; legs I and II usually much longer than legs III and IV …… Thomisidae
-. Tarsi and sometimes metatarsi with scapulae; legs different ……... 17

17. Small to medium-size spiders (3-16 mm); chelicerae without teeth or at most one on retromargin; tarsus-metatarsus allowing movement in one plane only …… Philodromidae
-. Medium-size to large spiders (6-35 mm); chelicerae with at least two teeth (rarely one) on retromargin; membranous connection to metatarsus permits free movement of tarsus …… Sparassidae

18. Tarsi with trichobothria, often in a row ……. 19
-. Tarsi without trichobothria ……... 22

19. Eyes either in three to four rows or in three groups ……... 20
-. Eyes in two rows ……... 21

20. Clypeus very high; posterior eyes and anterior lateral eyes forming a hexagonal group in front of small anterior median eyes; numerous long spines on legs …….. Oxyopidae
-. Clypeus not as high; eye position and setae on legs different …….. Lycosidae

21. Posterior spinnerets long and two-segmented; trochanters not notched ….. Agelenidae
-. Posterior spinnerets not particularly long or with one segment only; trochanters often notched …… Zodariidae

22. Eyes in three groups, anterior median eyes apart, remainder in two triads; legs thin and long, tarsi pseudosegmented …….. Pholcidae
-. Eye pattern and legs different ……... 23

23. Anterior tibiae and patellae with prolateral row of alternating long and short curved spines; chelicerae with peg teeth …… Mimetidae
-. Legs without such spines …….. 24

24. Paracymbium a separate sclerite; tarsi usually cylindrical (anteriors sometimes fusiform); chelicerae often with stridulating file; small spiders (1.5-6 mm) … Linyphiidae
-. Paracymbium fused to cymbium or rudimentary; no cheliceral stridulating file; tarsi variable ……. 25

25. Tarsi IV with ventral comb of serrated hairs; brownish rings around eyes; femora without spines …… Theridiidae
-. Tarsi without ventral comb of serrated hairs; eyes without brownish rings .... Araneidae

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* Modified from Jocqué & Dippenaar-Schoeman (2006).

1 

2 

3 

4 

5 

Figs. 1-6. *Pterotricha dalmasi* Fage, 1929
1, 3-4. Male. 2, 5-6. Female.
1-2. Habitus, dorsal view.
3-4. ♂ Palpal organ. 3. Ventral view.
4. Retrolateral view.
5. ♀ Epigynum, ventral view.
6. Ditto, another specimen.

6 

1. *Pterotricha dalmasi* Fage, 1929 was recorded from Ha'il, Saudi Arabia by Desouky & El-Hennawy (2012). Now, it is also recorded from Ghabet Shohba and Rhaghdan (Al-Baha). It is different from *Pterotricha lesserti* Dalmas, 1921 that is recorded by Levy (1995) from Jiddah. It is known from Algeria and the Middle East (Levy, 1995; Platnick, 2014). The pictures of both male and female are included (Figs. 1-6).


7


8


9


10


11

Figs. 7-11. *Tibellus vossioni* Simon, 1884 ♂. 7. Habitus, dorsal view. 8. Cephalothorax, dorsal view. 9-11. Palpal organ. 9. Retrolateral view. 10-11. Ventral view.

2. Genus *Tibellus* of Family Philodromidae includes 49 world wide distributed species and 2 subspecies (Platnick, 2014). The male of *Tibellus vossioni* Simon, 1884 was described from Khartoum, Sudan (Simon, 1884) and redescribed in detail by Van den Berg & Dippenaar-Schoeman (1994). Two males of this species were collected in June 2011 from Gebel El-Baher and Ghabet Shohba (Al-Baha) (Figs. 7-11). It is the first record of this species outside Africa.

3. A female of *Eusparassus laevatus* (Simon, 1897) was collected from Raghdan (Al-Baha) in May 2011 (Figs. 12-14). Its epigynum is identical with the illustrations of Moradmand (2013). *Eusparassus walckenaeri* (Audouin, 1825) was recorded by Desouky

& El-Hennawy (2012). Due to the revision of Moradmand (2013), this species may be misidentified. The studied specimens may belong to *Eusparassus arabicus*.

12  13  14 

Figs. 12-14. *Eusparassus laevatus* (Simon, 1897), Female. 12. Cephalothorax, dorsal view. 13. Abdomen, dorsal view. 14. Epigynum, ventral view.

15  16 

17  18 

Figs. 15-18. *Runcinia grammica* (C.L. Koch, 1837) ♂.
15. Habitus, dorsal view.
16-18. Palpal organ.
16-17. Ventral view.
18. Retrolateral view.
17-18. another specimen.

4. Among the 30 described species of genus *Runcinia*, *R. grammica* (C.L. Koch, 1837) of Family Thomisidae is widely distributed in the Palaearctic region and southwards until South Africa (Platnick, 2014). A few specimens, including two adult males, were

collected from Al-Mekhwa (Al-Baha) in February and April 2012. The species is identified depending on Levy (1995) and photographed (Figs. 15-18).

II. Scorpions of Saudi Arabia

About five years ago, an updated list of scorpions recorded in Saudi Arabia with the distribution localities of the species and simplified identification keys to families and genera were published by El-Hennawy (2009). That list included 23 species and 3 subspecies that belong to 3 families: 18 species of 10 buthid genera, 1 hemiscorpiid species, and 4 species and 3 subspecies of 3 scorpionid genera. The history of scorpion studies in Saudi Arabia was discussed in the introduction of the same paper. Therefore, only a list of species and key to the scorpion families are here presented depending on that work which was "helpful and useful guide" to Al-Asmari *et al.* (2013). Desouky & Alshammari (2011) added further locality records in Ha'il region for their 8 studied species.

Order Scorpiones C.L.Koch, 1837
List of Saudi Arabian Scorpions

Family **Buthidae** C. L. Koch, 1837
Androctonus bicolor Ehrenberg, 1828
Androctonus crassicauda (Olivier, 1807)
Apistobuthus pterygocercus Finnegan, 1932
Buthacus buettikeri Hendrixson, 2006
Buthacus yotvatensis nigroaculeatus Levy, Amitai & Shulov, 1973
Butheolus anthracinus (Pocock, 1895)
Butheolus villosus Hendrixson, 2006
Compsobuthus arabicus Levy, Amitai & Shulov, 1973
Compsobuthus fuscatus Hendrixson, 2006
Compsobuthus longipalpis Levy, Amitai & Shulov, 1973
Compsobuthus pallidus Hendrixson, 2006
Compsobuthus setosus Hendrixson, 2006
Hottentotta jayakari jayakari (Pocock, 1895)
Leiurus jordanensis Lourenço, Modry & Amr, 2002
Leiurus quinquestriatus (Ehrenberg, 1828)
Orthochirus innesi Simon, 1910
Parabuthus leiosoma leiosoma (Ehrenberg, 1828)
Vachoniolus globimanus Levy, Amitai & Shulov, 1973

Family **Hemiscorpiidae** Pocock, 1893
Hemiscorpius arabicus Pocock, 1899

Family **Scorpionidae** Peters, 1862
Nebo hierichonticus (Simon, 1872)
Pandinus (Pandinurus) arabicus (Kraepelin, 1894)
Pandinus (Pandinurus) exitialis (Pocock, 1888)
Scorpio maurus arabicus (Pocock, 1900)
Scorpio maurus fuscus (Ehrenberg, 1829)
Scorpio maurus kruglovi Birula, 1910
Scorpio maurus sspp.

3 Families, 14 Genera, 23 Species, 3 subspecies

Key to scorpion families recorded from Saudi Arabia

1. Pedipalp patella without ventral trichobothria; sternum subtriangular; anterior margin of carapace not conspicuously notched …….... Family **Buthidae** C. L. Koch, 1837
– Pedipalp patella with one or more ventral trichobothria; sternum subpentagonal; anterior margin of carapace with distinct notch 2

2. Metasomal segments I-IV with paired ventral submedian carinae; pedipalp chela trichobothrium **ib** located near base of fixed finger; lateroapical margins of tarsi produced into rounded lobes ..……..... Family **Scorpionidae** Latreille, 1802
– Metasomal segments I-IV with single ventromedian carina; pedipalp chela trichobothrium **ib** located midway along fixed finger; lateroapical margins of tarsi straight ..... Family **Hemiscorpiidae** Pocock, 1893

III. Pseudoscorpions of Saudi Arabia

Mahnert (1980) recorded three species of pseudoscorpions and described three new species, two of them are endemic, from Saudi Arabia. Eleven years later, he recorded seven species of pseudoscorpions and described seven new endemic species from Saudi Arabia (Mahnert, 1991). Recently, Mahnert *et al.* (2014) described another new endemic species from Saudi Arabia, *Pseudochthonius arabicus* Mahnert, 2014, recorded *Paratemnoides ellingseni* (Beier, 1932) and *Withius piger* (Simon, 1878) in addition to the two families Chthoniidae and Atemnidae for the first time from Saudi Arabia, and added further records of *Minniza monticola* Mahnert, 1991, *Rhacochelifer sonyae* Mahnert, 1991, and *Withius arabicus* Mahnert, 1980 from Saudi Arabia.

Order Pseudoscorpiones de Geer, 1778 *

Suborder Epiocheirata
Superfamily Chthonioidea
Family Chthoniidae Daday, 1888
Genus ***Pseudochthonius*** Balzan, 1892
Pseudochthonius arabicus Mahnert, 2014 (Endemic)
Pseudochthonius arabicus Mahnert n. sp. (Mahnert *et al.*, 2014: 388-391, Figs. 1–2). Material examined. Holotype ♂ (MHNG), Saudi Arabia, Al Bahah, Al Mukwah, Dhi Ayn Archeological Village, 11.v.2011, 20°12′39.7″N, 41°26′30.2″E, 741 m. Paratype ♀ (KSMA), same data.

Suborder Iocheirata
Superfamily Cheliferoidea
Family Atemnidae Kishida, 1929
Subfamily Atemninae
Genus ***Paratemnoides*** Harvey, 1991
Paratemnoides ellingseni (Beier, 1932)
Type Locality: Baía de Maputo (as Delagoa Bay), *Maputo***, Mozambique.**
Paratemnoides ellingseni (Beier, 1932) (Mahnert *et al.*, 2014: 391).
Material examined. Al Urdiyah Government, W. Qonouna, 12.V.2011, 353 m, 19°25′45.7″N, 41°36′18.1″E: 1♂ (MHNG).

Family Cheliferidae Risso, 1826

Subfamily Cheliferinae

Genus ***Dactylochelifer*** Beier, 1932

Dactylochelifer arabicus Mahnert, 1991 (Endemic)

Dactylochelifer arabicus n. sp., Mahnert, 1991: 195-197, figs. 66-69, Holotype: ♂, west of Mukhtayu, 20.III.1981, A. Barkham, NHMB; 1♀, Kushm al Buwaybiyat, 23.IX.1979, W. Büttiker; 6♂♂, 3♀♀, Kushm Dibi, 29.II.1980, A. Barkham; 3♂♂, 2♀♀, same locality, 30.I.1981, W. Büttiker; 1♀, Wadi Tawqi, 15.III.1980, W. Büttiker; 2♂♂, 4♀♀, same locality, 9.III.1982, A. Barkham; 1♂, 6♀♀, Wadi Al Ammariya, 7.II.1980, A. Barkham; 1♂, 3♀♀, same locality, 22.II.1980, A. Barkham; 1♀, same locality, 1.IV.1980, W. Büttiker; all NHMB, MHNG.

Genus ***Rhacochelifer*** Beier, 1932

Rhacochelifer barkhamae Mahnert, 1980 (Endemic)

Type Locality: Khurays (as Khureys) **[**25°05'N, 48°03'E], *Ash-Sharqīyah*, **Saudi Arabia.**

Rhacochelifer barkhamae n. sp., Mahnert, 1980: 45-47, figs. 36-43, Khureys, 3.VI.1979, A.M. Talhouk: 1♂ (Holotypus; Mus. Basel); Harvey, 1991: 525, Khureys; Mahnert, 1991: 194, Khureys.

Rhacochelifer longeunguiculatus Beier, 1963

Rhacochelifer longeunguiculatus Beier, 1963: Harvey, 1991: 527.

Rhacochelifer cf. *longeunguiculatus* Beier: Mahnert, 1980: 47, Wadi Khumra, 14.V.1976, W. Büttiker: 1♀; Abha Gizan, km 28, Wadi Ad Dilla, 22.IV.1976, W. Wittmer - W. Büttiker: 1 Tritonymphe [Mahnert, 1991: 193, "All specimens I recorded (1980) from Saudi Arabia … also belong to this species."].

Rhacochelifer longueunguiculatus Beier, 1963: Mahnert, 1991: 193, 1♀, Wadi Tawqi, 25.IV.1980, W. Büttiker, MHNG.

Rhacochelifer sonyae Mahnert, 1991 (Endemic)

Rhacochelifer sonyae n. sp., Mahnert, 1991: 194-196, figs. 70-76, Holotype: ♂, Al Alayyah, 8.X.1979, NHMB. Paratypes: 3♂♂, 2♀♀, 1 protonymph, Makkah, Bani Omar, 21°06′N, 40°24′E, 1730 m, 22-24.VIII.1985; 6♂♂, 21♀♀, 12 tritonymphs, 2 deutonymphs, Harithi, 21°18'N 40°18'E; 3♂♂, 6♀♀, 1 tritonymph, same locality, 20-21.IX.1985, all W. Büttiker, NHMB, MHNG.

Rhacochelifer sonyae Mahnert, 1991 (Mahnert *et al.*, 2014: 391).

Material examined. Al Bahah, W. Elzaraeb, 9.V.2011, 2086 m, 20°04′24.3″N, 41°23′12.3″E: 1♀. Khamis Mushayt, W. Ben Hashbal, 26.IV.2011, 18°35′41.3″N, 42°39′01.3″E, 1892 m: 1♀.

Genus ***Strobilochelifer*** Beier, 1932

Strobilochelifer spinipalpis (Redikorzev, 1918)

Strobilochelifer grandimanus: Kut al Sayyid, Al Basrah (as Basrah), *Al Basrah***, Iraq.**

Strobilochelifer spinipalpis (Redikorzev, 1918): Mahnert, 1980: 43-45, figs. 29-35, Hofuf, 23.V., 11.VII., 25.VII.1978, 12.VI.1979: 2♂ 3♀ 1 Tritonymphe; Hofuf, Krone und Borke einer Dattelpalme, 25.IV.1979: 4♂ 2♀ 2 Tritonymphen; Hofuf, Krone eines kleinen Baums, 2.VI.1979: 5♂ 6♀ 1 Tritonymphe, alle leg. W. Büttiker und L. Kahn.; Harvey, 1991: 532; Mahnert, 1991: 192, 1♂, Wadi Fanjah, 23°27'N 58°08'E, 9.IV.1985, C. Holzschuh; 1♀, Qatif, 14-15.V.1983, C. Holzschuh; 1♂, Riyadh, 1.VIII.1982, A.S. Talhouk, NHMB.

Family **Withiidae** Chamberlin, 1931
Subfamily **Paragoniochernetinae**
Genus ***Pseudochernes*** Beier, 1954
Pseudochernes arabicus Mahnert, 1991 (Endemic)
Type Locality: Jīzān, *Jīzān* **[**16°53'N, 42°33'E], **Saudi Arabia.**
Pseudochernes arabicus n. sp., Mahnert, 1991: 191-192, figs. 55-59, Holotype ♂, Arabia: Jizan, 8.I.1981, W. Büttiker, NHMB.

Subfamily **Withiinae**
Genus ***Nannowithius*** Beier, 1932
Nannowithius buettikeri (Mahnert, 1980)
Type Locality: Kushm al Buwaybiyat, *Ar Riyād*, **Saudi Arabia.**
Myrmecowithius buettikeri n. sp., Mahnert, 1980: 40-42, figs., 23-28, Kushm Buwaybiyat, 25/26.V.1978, W. Büttiker: 1♂ (Holotypus; Mus. Basel), 3♀; Al Khubra, 29.V.1978, W. Büttiker: 1♀; Riyadh, 3.III.1978, A.M. Talhouk: 1♀ (Paratypen; Mus. Basel und Genf).
Nannowithius buettikeri (Mahnert): Harvey, 1991a: 648, Kushm Buwaybiyat.

Genus ***Withius*** Kew, 1911
Withius arabicus Mahnert, 1980 (Endemic)
Type Locality: Qaraah, *'Asīr*, **Saudi Arabia.**
Withius (*Allowithius*) *arabicus* n. sp., Mahnert, 1980: 36-38, figs. 10-16, Dorf Qaraah, 2000 m, 16.IV.1976, W. Wittmer - W. Büttiker: 1♂ (Holotypus; Mus. Basel), 4♂ 3♀; Wadi Marba, Khamis-Mushayt, 2050 m, 17.IV.1976; W. Wittmer - W. Büttiker: 1♂ (Paratypen; Mus. Basel und Genf).
Withius arabicus Mahnert, 1980: Harvey, 1991: 659, Dorf Qaraah; Mahnert, 1991: 192, Qaraah, Wadi Marba; Mahnert *et al.*, 2014: 392, Mahnert (1980) described the new species *Withius arabicus* from this same area, Dorf Qaraah (Al Qar'a or Al Gar'a Abha, Asir Province, 2000 m, 18.24080°N, 42.48965°E; Wadi Marba (near the Abha-Jazan road, approximately 53 km from Jazan), Khamis-Mushyat, 17.9000°N, 42.3833°E, 2050m) (Mahnert *et al.*, 2014: 392).

Withius piger (Simon, 1878)
Type Locality: *Chelifer piger*: Bou Saâda (as Bou-Saada), *M'Sila*, Algeria.
Chelifer subruber: Hyères, Var, *Provence-Alpes-Côtes-d'Azur*, France.
Withius piger (Simon, 1878) (Mahnert *et al.*, 2014: 392). Material examined. Al Urdiyah Government, W. Qonouna, 12.v.2011, 353 m, 19°25′45.7″N, 41°36′18.1″E: 2♂, 1 deutonymph. Al Bahah, Al Mukwah, Dhi Ayn Archeological Village, 11.v.2011, 20°12′39.7″N, 1°26′30.2″E, 741 m: 6♂, 9♀, 2 tritonymphs + 24 specimens (adults and nymphs). Al Bahah, W. Turabah, Al Mandaq, 14.v.2011, 20°12′39.7″N, 41°17′17.6″E, 1793m: 1♂ (under a rock, next to an Acacia tree, in company with the ant *Tetramorium caespitum* (Linnaeus, 1758)). Asir Province, W. Jallah, 16.v.2011, 20°08′04.1″N, 41°20′34.4″E: 2♂.

Superfamily Garypoidea
Family **Olpiidae** Banks, 1895
Subfamily Hesperolpiinae
Genus ***Calocheirus*** Chamberlin, 1930
Calocheirus atopos Chamberlin, 1930
Type Locality: *Calocheirus atopos*: near Port Sudan, **Sudan.**

Calocheirus atopos Chamberlin, 1930: Harvey, 1991: 273; Mahnert, 1991: 172-173, 1♀, Wadi Horash, 1600 m, 21.V.1982, W. Büttiker.
Apolpiolum peregrinum Beier, 1963: Mahnert, 1980: 33-35, fig. 1, Bureida, 28.V.1978, W. Büttiker: 1♂; Al Khubra, 29./30.V.1978, W. Büttiker: 1♂; Wadi Khumra, 23.III.1979, A. Barkham: 1♀ (in part; see *Calocheirus gracilis* Mahnert) (synonymised by Mahnert, 1986c: 148).

Calocheirus gracilis Mahnert, 1991 (Endemic)
Type Locality: Wadi Khumra, *Ar Riyād*, **Saudi Arabia.**
Apolpiolum peregrinum Beier: Mahnert, 1980: 33-35 (misidentification, in part).
Calocheirus gracilis Mahnert, 1991: 173-174, figs 1-6. Holotype: ♀, Saudi Arabia: Wadi Khumra, 23.III.1979, A. Barkham, NHMB. Paratypes: 1♂, 1 tritonymph, Wadi Al Ammariya, 22.II.1980. MHNG, NHMB; 1 deutonymph, same locality, 7.II.1980, NHMB; 1♂, same locality, 17.II.1980, NHMB; all A. Barkham.

Subfamily Olpiinae
Genus *Minniza* Simon, 1881
Minniza babylonica Beier, 1931
Minniza syriaca: near Ar Ruţbah (as Rutbah), *Al Anbār*, **Iraq.**
Minniza babylonica Beier, 1931: Mahnert, 1980: 35-36, figs. 2-9, Wadi Hanifa, 25.IV.1976; W. Wittmer - W. Büttiker: Wadi Hanifa, 6.II.1976: 1 Trito., 1♀; Kushm Dibi, 20./21.IV.1978: 3♂ 5♀; Wadi Khumra, 27.IV.1979: 8♂ 14♀, leg. W. Büttiker; Kushm Dibi, 5.VIII.1978: 1♂; Wadi Ammariyah, 2.III.1979: 9♂ 3♀; 16.III.1979: 1♂ 2♀; 31.III.1979: 10♂ 12♀; Wadi Khumra, 23.III.1979: 10♂ 5♀ 1T, alle leg. A. Barkham; Harvey, 1991: 284; Mahnert, 1991: 177, numerous specimens from Baloum nr Al Hariq, W of Horash (1600 m), Kashm al Alash, Khashm Khafs, Kushm al Buwaybiyat, Kushm Dibi, W of Mukhtayu, Wadi Al Ammariya, Wadi al Dilla (550 m, with ants) Wadi Hamamah, Wadi Khumra, Wadi Majarish, Wadi Nissah, Wadi Tawqi, all collected by W. Büttiker.

Minniza barkhamae Mahnert, 1991 (Endemic)
Type Locality: Wadi Khumra, *Ar Riyād*, **Saudi Arabia.**
Minniza barkhamae n. sp., Mahnert, 1991: 178-180, figs. 19-24, Holotype: ♀, Wadi Khumra, 25.I.1980, A. Barkham, NHMB. Paratypes: 1♀, same data, MHNG; 1♂, Shumaisy, 25°06'N 38°43'E, 740 m, 11-12.XI.1986, W. Büttiker, NHMB.

Minniza levisetosa Mahnert, 1991 (Endemic)
Type Locality: Mawqaq **[**27°23'N, 41°11'E], *Hā'īl*, **Saudi Arabia.**
Minniza levisetosa n. sp., Mahnert, 1991: 179-181, figs. 25-29, Holotype: ♂, Mawqaq, 27°19'N 41°11'E, 1090 m, 4.V.1985, W. Büttiker, NHMB. Paratypes: 1♂, 1♀, 1 tritonymph, NHMB, MHNG.

Minniza monticola Mahnert, 1991
Type Locality: W. of Horash, *Makkah*, **Saudi Arabia.**
Minniza monticola n. sp., Mahnert, 1991: 183-184, figs. 37-40, Holotype: ♀, Makkah distr., W of Horash, 21°07'N 40°31'E, 1600 m, 21.IV.1985, W. Büttiker, NHMB. Paratypes: 1♂, same data, 21.V.1982, MHNG; 2♂♂, 1♀, Harithi, 21°18'N 40°18'E, 1910 m, 18-19.IV.1985, W. Büttiker, NHMB, MHNG.
Minniza monticola Mahnert, 1991 (Mahnert *et al.*, 2014: 391).

Material examined. Al Bahah, W. Turabah, Al Mandaq, 14.v.2011, 20°12′39.7″N, 41°17′17.6″E, 1793 m, found under rocks, near Acacia tree: 2♂; same locality and habitat, 10.V.2011: 2♂.

Minniza persica Beier, 1951
Minniza persica Beier, 1951: Mahnert, 1991: 177-178, specimens from Jebel Dhi Khul, Kashm al Alash, Wadi Hanifa (W. Büttiker), Kushm Dibi and Wadi Ammariyah (A. Barkham).

Genus ***Parolpium*** Beier, 1931
Parolpium gracile (Beier, 1930) (Endemic)
Type Locality: Jazarat Sinafir (as Senafir Island) **[**27°55'N, 34°43'E], *Tabūk*, **Saudi Arabia.** [Egypt?]
Olpium gracile Beier, 1930: Beier, 1933c: 85-87, figs. 1-2, Aegypten, "Typen: 1♂,1♀, Insel Senafir im Roten Meer an der Südspitze der Halbinsel Sinai, 15.IV.1928, R.Ph. Dollfus leg. Paratypen: 7 weitere Exemplare vom selben Fundorte und Sammler." [Types in MNHN, paratypes in Musée Royal de Zoologie d'Égypte, en formation au Caire. (Note de R.Ph. Dollfus)]; El-Hennawy, 1988b: 10, Senafir Island (Red Sea), Egypt.
Parolpium gracile (Beier): Harvey, 1991: 297, Senafir Island.

Pseudoscorpiones
Olpiidae - Abd El-Wakeil *et al.* (2014): Wadi Al-Arj, Taif, Saudi Arabia.
Al-Baha, leg. El-Hawagry: 1; 1, 2.1.2012, Dhee Ain.

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* This list of Saudi Arabian pseudosscorpions is extracted from Harvey (2013) in addition to Mahnert (1980, 1991, 2014).

List of Saudi Arabian Pseudoscorpions
Order Pseudoscorpiones

Suborder Epiocheirata
Superfamily Chthonioidea
Family Chthoniidae Daday, 1888
Pseudochthonius arabicus Mahnert, 2014*

Suborder Iocheirata
Superfamily Cheliferoidea
Family Atemnidae Kishida, 1929
Paratemnoides ellingseni (Beier, 1932)
Family Cheliferidae Risso, 1826
Dactylochelifer arabicus Mahnert 1991*
Rhacochelifer barkhamae Mahnert 1980*
Rhacochelifer longeunguiculatus Beier 1963
Rhacochelifer sonyae Mahnert 1991*
Strobilochelifer spinipalpis (Redikorzev 1918)
Family Withiidae Chamberlin, 1931
Nannowithius buettikeri (Mahnert 1980)
Pseudochernes arabicus Mahnert 1991*
Withius arabicus Mahnert 1980*
Withius piger (Simon, 1878)

Superfamily Garypoidea

Family **Olpiidae** Banks, 1895

Calocheirus atopos Chamberlin, 1930
Calocheirus gracilis Mahnert, 1991*
Minniza babylonica Beier, 1931
Minniza barkhamae Mahnert, 1991*
Minniza levisetosa Mahnert, 1991*
Minniza monticola Mahnert, 1991
Minniza persica Beier, 1951
Parolpium gracile (Beier, 1930)*

5 Families, 11 Genera, 19 Species (10 of them are endemic *)

Key to Families *

1. Tarsi of legs 1 and 2 consist of one segment each while tarsi of legs 3 and 4 consist of two segments each; Chelicerae large, sometimes 2/3 the carapace length; Eyes usually 4 or absent …….. Family **Chthoniidae**
-. Tarsi of legs 1-4 consist of two segments each; Chelicerae moderately large, about 1/2 the carapace length or shorter; Eyes usually 4, may be 2 or absent …….. Family **Olpiidae**
--. Tarsi of legs 1-4 consist of one segment each; Chelicerae small, not more than 1/3 the carapace length; Eyes 2 or absent ……..…… 2

2. Venom apparatus developed only in the fixed finger; Abdominal tergites and sternites usually not completely divided; Carapace smooth, with, at most, a shallow transverse furrow near the middle; Tarsus of leg 4 has a prominent tactile seta near the proximal end …… Family **Atemnidae**
-. Venom apparatus well developed in both fingers of the palpal chela; Abdominal tergites and sternites usually divided ……. 3

3. Cheliceral flagellum consists of 3 setae; Legs tarsal claws and subterminal tarsal seta simple or toothed; Body length 3-4 mm ……. Family **Cheliferidae**
-. Cheliceral flagellum consists of 4 setae; Legs tarsal claws and subterminal tarsal seta simple; Body length about 2-3 mm ……. Family **Withiidae**

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* Modified from El-Hennawy (1988a).

IV. Sun-Spiders of Saudi Arabia

Order Solifugae Sundevall, 1833

Family **Daesiidae** Kraepelin
Subfamily **Daesiinae** Kraepelin, 1899
Genus ***Biton*** Karsch, 1880
Biton (Biton) ehrenbergi Karsch, 1880
Biton ehrenbergi Karsch, 1880: El-Hennawy (1999: 77); Harvey (2003: 220-221, Type localities: Al Tor, *Janûb Sînâî*, Egypt; Syria; Egypt; Dunqulah (as Dongolah), *Northern*, Sudan).
Biton ehrenbergi Karsch, 1880 - Al-Baha, leg. El-Hawagry: 1♂, 1♀, 8.6.2011, 1♂, 1.2.2012, Ghabet Shohba; 1j, 13.5.2011, Raghdan; 2♂, 1.6.2011, Gebel El-Baher.
Biton sp. - Abd El-Wakeil *et al.* (2014): Wadi Al-Arj, Taif, Saudi Arabia.

Biton philbyi Lawrence, 1954 Endemic
Biton philbyi Lawrence, 1954: Harvey (2003: 223, Type locality: Taif, *Makkah*, Saudi Arabia).

Biton (Biton) sabulosus (Pocock, 1903)
Daesia sabulosa Pocock, 1903: Harvey (2003: 224, Type locality: Dhala (as Dthala), *Dhala*, Yemen. Distribution: Saudi Arabia, Yemen).
Biton sabulosus (Pocock, 1903): Lawrence, 1954: 116; El-Hennawy (1999: 78, Arabia).

Biton (Biton) truncatidens Lawrence, 1954 Endemic
Biton truncatidens Lawrence, 1954: Harvey (2003: 225, Type locality: Ashaira, Saudi Arabia).

Family **Galeodidae** Sundevall, 1833
Genus *Galeodes* Olivier, 1791
Galeodes arabs C.L. Koch, 1842
Galeodes arabs C.L. Koch, 1842: El-Hennawy (1999: 84); Harvey (2003: 256-257).

Galeodes lacertosus Roewer, 1934
Galeodes lacertosus Roewer, 1934: Harvey (2003: 265, Type locality: Wadi al Masilah (as Wadi Masila), *Hadramawt*, Yemen).

Galeodes levyi Harvey, 2002
Galeodes dorsalis Roewer, 1934: El-Hennawy (1999: 85); Lawrence, 1954: 120; Levy & Shulov, 1964: 110 [junior primary homonym of *Galeodes dorsalis* Latreille, 1817].
Galeodes levyi Harvey, 2002: 453 [replacement name for *Galeodes dorsalis* Roewer, 1934]; Harvey (2003: 266, Type locality: Al Lith (as "El Lit"), *Makkah*, Saudi Arabia).

Galeodes granti Pocock, 1903
Galeodes granti Pocock, 1903: El-Hennawy (1999: 86); Type locality: Al Kabar (as El Kubar), *Dhala*, Yemen.

Genus ***Galeodopsis*** Birula, 1903
Galeodopsis cyrus (Pocock, 1895)
Galeodes cyrus Pocock, 1895: Harvey (2003: 273-274, Type locality: Al Faw (as Fao), *Al Basrah*, Iraq).

Genus ***Othoes*** Hirst, 1911
Othoes hirsti Lawrence, 1954 Endemic
Othoes hirsti Lawrence, 1954: Harvey (2003: 274, Type locality: Jiddah (as Jedda), *Makkah*, Saudi Arabia).

Genus ***Paragaleodes*** Kraepelin, 1899
Paragaleodes scalaris (C.L. Koch, 1842)
Galeodes scalaris C.L. Koch, 1842: El-Hennawy (1999: 88).
Paragaleodes scalaris (C.L. Koch, 1842): Harvey (2003: 275-276**,** Type locality of *Galeodes scalaris*: Arabia).

Family **Rhagodidae** Pocock, 1897
Genus ***Rhagodeca*** Roewer, 1933
Rhagodeca impavida (C.L. Koch, 1842)
Rhagodeca impavida (C.L. Koch, 1842): El-Hennawy (1999: 94, Arabia, Oman); Harvey (2003: 292, Middle East).

Genus ***Rhagodorta*** Roewer, 1933
Rhagodorta zorab (Birula, 1905)
Rhagodorta zorab (Birula, 1905): Lawrence, 1954: 111, 1♂, Jidda, Arabia, 1.v.1934, collected by H. St. J. B. Philby (B.M. 1952.10.30.4); Harvey (2003: 302, Type locality: *Tehran*, Iran).

Family **Solpugidae** Leach, 1815
Subfamily **Ferrandiinae** Roewer, 1933
Genus ***Ferrandia*** Roewer, 1933
Ferrandia arabica Lawrence, 1954 Endemic
Ferrandia arabica Lawrence, 1954: Harvey (2003: 303, Type locality: Hadda, Saudi Arabia).

Ferrandia robusta Lawrence, 1954 Endemic
Ferrandia robusta Lawrence, 1954: Harvey (2003: 303, Type locality: Khurma, Saudi Arabia. Note: There are several localities named Khurma in Saudi Arabia).

4 Families, 8 Genera, 15 Species [5 of them endemic, all described by Lawrence (1954)]

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* This list of Saudi Arabian sun-spiders is extracted from Harvey (2013) in addition to El-Hennawy (1999).

Key to Families *

1. Anus ventrally located ..... Family **Rhagodidae**
-. Anus terminally located 2

2. Tarsal segmentation 1-4-4-(6-7) ..... Family **Solpugidae**
-. Tarsal segmentation 1-1-1-1 to 1-2-2-4 3

3. Tarsal claws of legs 2 to 4 setaceous ..... Family **Galeodidae**
-. Tarsal claws of legs 2 to 4 smooth ..... Family **Daesiidae**

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* Modified from El-Hennawy (1990).

V. Harvestmen of Saudi Arabia

Although harvestmen were occasionally mentioned in scientific papers from Saudi Arabia (e.g. Faragalla & Taher (1991) who recorded them from Khulais, 80 km northeast Jeddah), the first known identified species from the country was recorded by Staręga (2004). Only one species of this arachnid order is known from Saudi Arabia until now.

Order Opiliones Sundevall, 1833

Eupnoi Hansen & Sørensen, 1904

Superfamily **Phalangioidea** Latreille, 1802

Family **Phalangiidae** Latreille, 1802

Subfamily **Phalangiinae** Latreille, 1802

Metaphalangium sudanum Roewer, 1961

Staręga (2004: 239): 1♂, 2 juv. – "Saudi-Arabien: Shafa, 21s12'N, 40s23'E, 230 m, 21.XII.1982, leg. W. Büttiker." 1984 det. W. Staręga (Coll. J. Martens –Mainz).

The specimens from Sudan and Saudi Arabia are stronger armed as those from Israel and Egypt – the Egyptian males (the holo- and paratypus of *M. orientale*) were smaller: respectively 7.5 and 6.5 mm long and had a shorter penis: 2.69 long, glans 0.34, stylus 0.22 mm.

Distribution. Israel: ?Wadi Abyad (probably Roewer, 1953 sub *M. propinquum*), En Radian (Staręga, 1967 sub *M. propinquum*). Egypt: Masâra north-west of Asyüt (Staręga, 1973a sub *M. orientale*). Sudan: Sinkat south of Port Sudan (Roewer, 1961). Saudi Arabia: Ash Shafa south of Mekka (Coll. J. Martens) – the first species of harvestman known from the country!

1 Family, 1 Genus, 1 Species

VI. Micro Whip-Scorpions of Saudi Arabia

Order Palpigradi Thorell, 1888

Family **Eukoeneniidae** Petrunkevitch, 1955

Genus ***Leptokoenenia*** Condé, 1965

Leptokoenenia gerlachi Condé, 1965

Leptokoenenia gerlachi Condé, 1965: 1900, figs. a-d; Rowland and Sissom, 1980: 81.

Type locality: Sarad Sarso Island, *Jizan*, Saudi Arabia.

Distribution: Saudi Arabia.

"The peculiar genus *Leptokoenenia* Condé is found in littoral ecosystems in Saudi Arabia and Congo, a habitat once thought to represent the archetypal environment from which all other palpigrades may have evolved (Savory, 1977)" (Harvey, 2003: 149).

1 Family, 1 Genus, 1 Species

VII. Whip-Spiders of Saudi Arabia

Order Amblypygi Thorell, 1883

Family **Phrynichidae** Simon, 1892

Subfamily **Phrynichinae** Simon, 1892

Genus ***Phrynichus*** Karsch, 1879

Phrynichus gaucheri Weygoldt, 1998

Myodalis jayakari (Pocock): Whittick, 1941: 45–48, figs. 1–7 (misidentification, see also *Phrynichus deflersi* Simon and *Phrynichus jayakari* Pocock).

Phrynichus jayakari Pocock: Weygoldt, 1995: fig. 12 (misidentification, in part).

Phrynichus gaucheri Weygoldt, 1998: 9–10, figs. 12–15, 34.

Type locality: Khotib, Sadig Island, Farasan al Kabir Islands, *Jizan*, Saudi Arabia.

Distribution: Saudi Arabia.

Weygoldt (2000: fig. 292) recorded *Phrynichus deflersi* sp. gr. from Saudi Arabia and adjacent countries. Also, he said: "The species of the *Phrynichus deflersi* species-group, *P. deflersi*, *P. gaucheri* and *P. jayakari*, are found on the Arabian Peninsula in

Saudi Arabia, … On the Farasan Islands in Saudi Arabia, wells have been drilled along such fissures and the animals gather in such wells. These whip spiders are not cavernicolous as they have normal eyes and are occasionally found in uninhabited or seldom-used houses near Riyadh, Mecca or Masqat" (p.132).

1 Family, 1 Genus, 1 Species

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